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THE

London

MEDICAL GAZETTE;

BEING A

Weekly Journal

OF

MEDICINE AND THE COLLATERAL SCIENCES.

VOL. XIII.

(VOL. I. FOR THE SESSION 1833-34.)

LONDON:

PRINTED FOR LONGMAN, REES, ORME, BROWN, GREEN, & LONGMAN,

PATERNOSTER-ROW.

1834.

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SATURDAY, OCTOBER 5, 1833.

INTRODUCTORY LECTURE,

ON OPENING THE MEDICAL SESSION AT KING'S COLLEGE,

DELIVERED BY

DR. WATSON.

GENTLEMEN,—We are met together to commence, for the third time, the medical session of this college. Many of you are not strangers in our schools, but return, after the customary interval of rest and refreshment, to resume the studies in which they have already made some progress. Others are here for the first time, about to *begin* the stated course of preparation for the duties of their professional lives. I take it for granted, that all are sincerely bent upon qualifying themselves effectually for those most serious duties. If any be *not* thus in earnest, their presence amongst us will involve a foolish waste of time and expense, a sad mockery of the hopes and affections of their friends, and a fearful disregard of the most solemn obligations. But I will not entertain the unpleasing supposition, that among the numbers who now fill the benches before me, even a single student can be found so weak, or so vicious, as to propose to himself the high offices of physic, with a declared indifference about his capacity to discharge them well and faithfully.

The blind desire of knowledge, however, is not all that is necessary for your success. The period of scholastic education, so far as it regards medicine, and is enjoined by authority, is unhappily short. The science itself is vast and difficult. Very many (I am sorry to say) of those who profess to be its followers, content themselves, from choice or from necessity, with the smallest measure of formal study permitted by the regulations to which they are subject. But it is a thing impossible that even the readiest intellect should gather up, in that brief and most inadequate period—much more that it should set in order and digest for practical use—the varied mass of information required to fit a man for interfering with disease. Much has been done of late years towards raising the character of that large and influential class of men who are engaged in the general practice of physic and surgery throughout the country. New and very important branches of science have been included in the prescribed curriculum of study; and the extent and order of the whole have been enlarged, and more exactly defined. But while an increased amount of knowledge is thus demanded from the student, the space of time allotted for its acquisition remains the same as before; and the beneficial tendency of regulations, which in themselves are wise and salutary, is thus miserably cramped and defeated. I am not ignorant, indeed, of the difficulties by which, in legislating on this subject, the Society of Apothecaries are embarrassed. I know, and am glad to acknowledge, how much they deserve the thanks of the profession and of the public, for the improvements they have already effected, and for those which they are willing, though not yet able, to effect. But their praiseworthy intentions can never receive their full accomplishment, until the term of study, as well as the measure of knowledge, is more accurately adjusted to the true dimensions of the science. I trust that the time is approaching when this change, so requisite for the public welfare and security, will be brought about. The most easy and natural mode of executing it (as it seems to me) would be by deducting some years from the period of apprenticeship, and adding them to the regulated course of academical study. This would enlarge the present scanty minimum, without necessarily imposing any fresh restraint upon the stu-

dent, in respect of time, age, or cost. I would fain hope, that many of those who resort to this college for instruction, will be found both able and desirous to extend the term of their pupillage beyond the narrow requirements of the law. But however this may be, the shortness of the time which is supposed to suffice for the majority, increases the obligation to husband it carefully, and to employ it to the best advantage. I deem it, therefore, of much importance, that you should clearly perceive, beforehand, what it is that you are to expect and to do in this biennial course. The science of medicine is made up of many distinct parts, variously connected, differing considerably in their nature, and (what is more to my present purpose) requiring a different kind and measure of your attention *now*. Some things there are which you *may* master completely here, and of which, if you do *not* so master them, you will scarcely be able to supply the defect hereafter. Of others you can only possess yourselves of the outline and principle; they are to be perfected after you leave this place; and they require, for their full attainment, the continued labour of many years—aye, of your whole life. Yet the mode of pursuing them—the entrance upon the right path of inquiry—the clue to their profitable investigation, you may, you must, learn now. I do not know that I can more usefully fulfil the task with which it has been the pleasure of my colleagues to honour me to-day, than by endeavouring to place distinctly before you the nature and objects of the several departments of science which we profess to teach, and which you are invited to learn—to explain their relative importance and requirements—the order and dependancy in which they should be followed out—the manner in which they concur to form the skilful practitioner—the spirit in which they deserve to be cultivated—and the noble ends to which, by God's blessing, they may be made subservient.

None of you require to be told, that the broad and avowed aim of your studies is to qualify you to exercise the art of physic: which is, to alleviate the sufferings of your fellow men—to cure or prevent disease—and in so far as mortal skill may achieve purposes so great, to prolong life, and to render death easy. You want to know the means, and the way to use them, of correcting the disturbances and and repairing the defects of the living human body.

Now it seems very obvious that in order to rectify what may be amiss in the bodily frame, the first thing necessary is that we comprehend its structure. Yet plain as this necessity appears to be, it is singular how long the superstition, the prejudices, and the ignorance of mankind, led them to overlook or deny it. Some there are even yet, I believe, though but few, who persuade themselves that medicine may be learned, and practised with sufficient success, by men who know little or nothing of the composition of that body with which they deal. I shall not now stay to examine this opinion; its futility will become apparent to you hereafter. For the present I must beg any of you who may entertain doubts upon the subject to take upon trust my assertion, that if we would mend the animal machine, we must, in most cases, be able to ascertain where and how it labours; and that we can discover this only by a knowledge of its parts, and their connexion and action, of its full and perfect play.

Anatomy, then, which teaches this knowledge, is the "hornbook" of our science, and with anatomy you will accordingly commence. The separate parts of the dead body will be displayed and described before you, and you will unfold and examine them for yourselves under the direction of those to whom they are familiar. The bony fabric that supports the whole—the muscles, bloodvessels, nerves, and viscera, with which it is clothed and filled—the relative situations and connexions of all these—the manner in which they are disposed and packed—the materials of which they are formed—these will constitute the objects of your earliest attention. Now all this it is exceedingly easy to learn: a very moderate share of intellect, and scarcely any *previous* learning, is necessary for its acquisition. Some exertion of memory, and the employment of the eyes and fingers, are sufficient. An illiterate peasant need have no difficulty in learning the anatomy of the body in the limited sense in which I have hitherto considered it. But this is not the manner in which *you* have to learn it. You cannot, unless you are dull and incurious indeed, advance a single step in this investigation without asking what are the uses of the parts you are examining?—what are the purposes which these exact, though intricate, arrangements are designed to serve?—to what end is this complication of solid and fluid parts—of pipes, and valves, and reservoirs—of cords, and levers, and hinges? In other words, you cannot *commence* the study of anatomy without an instant and strong impulse to the study of *physiology* also: the two, therefore, are from the first interwoven with each other; and that which would else be a dry detail of collocation for the memory, becomes instinct with wonder and interest. The mind passes from the dead and flaccid muscle to

the movements of the living limb; the empty vessels are replenished with their vital currents; and the dry bones are made alive in the contemplation of their fitness and proportions. Here, also, much is thoroughly known, and the intellect is exercised and stimulated as the subject opens before it: here, moreover, the uninstructed peasant would soon be at fault: and at once, from the very threshold of your studies, it becomes necessary that we should look back to the period which preceded them, and to inquire what preliminary knowledge may be requisite for their successful prosecution. You will perceive, on a very slight consideration, that there are many things with which you must become acquainted before you can follow even the initial study of anatomy and physiology with any intelligence of their true value and significance, or without perpetual stumbling. The wonderful and multiplied instruments of locomotion obey all the laws of *mechanical philosophy*. Their uses cannot be understood without some knowledge of that beautiful science. Still less may we hope, or dare attempt, to remedy their mechanical derangements. So also the circulation of the fluids through their appointed tubes, and the passage of the very breath of our nostrils, depend in a great and evident degree upon simple principles of *hydraulics* and *pneumatics*. And that most admirable microcosm, the eye—not more perfect indeed than other portions of the animal frame, yet to us most admirable, because in all its parts, to an instructed and prepared intellect, so obvious and intelligible—is nothing better than a curious toy—a strange, though beautiful puzzle, to one who is ignorant of the properties and phenomena of light, and the ascertained conclusions of the science of *optics*. With these branches of philosophy, then, it is expedient—it is even indispensably requisite—that you should in some degree be conversant. I do not say it is necessary that you should be able to work their more abstruse or delicate problems, or be even skilled in their practical application; but of the general principles of these sciences, and of the simpler truths which they embrace, some previous knowledge is absolutely required, if you would enter, properly equipped, even upon the frontiers of your peculiar province. Again, these very sciences imply and presuppose others. A certain amount—very easily and readily attainable, let me say—but a certain amount at least of *pure mathematics*, of the methods and principles of analytical and geometrical reasoning, is not only proper and desirable, but essential to your philosophical and satisfactory advancement. And since I have thus touched upon the subject of previous acquirements, I will add, that besides and above this acquaintance with natural philosophy, he who would become a master in our useful and honourable art, should also be imbued with some tincture of *ancient and modern literature*—should at least be able to read without much labour the classical languages of our own and of former ages. He will be ignorant of much that is both instructive and delightful, who cannot trace for himself, and in their own words, the thoughts and the discoveries of famous men whose writings have descended to us from the more splendid periods of antiquity; and he must be far behind the point of actual knowledge, if he is not qualified to drink instruction from the living and copious streams of Italy, Germany, and France. Not only are these accomplishments required for the full understanding of the matters proper to our science; they elevate, also, and dignify its character—throw a grace and charm around its pursuit, and by exercising the mental faculties, invigorate them for the more ready apprehension of the truth.

In this preparatory knowledge I trust you are already more or less instructed. If not, I earnestly advise you to lose no time in supplying the deficiency. Remember that every branch of science and learning which has now been recommended, is fully and systematically taught within these walls. At your age particular defects may be easily remedied in a great degree, by the diligent and regulated employment of a few hours even in every week. It will be well worth your while, if it be in your power, to prolong your residence amongst us for this very purpose. I can confidently assure you, that whatever labour or leisure you may thus expend, will be wisely bestowed, and will be looked back upon with lasting and unalloyed satisfaction in after life.

To return, however, to physiology and to anatomy, which is the handmaid and groundwork of physiology. You must, if you would understand these subjects aright, possess the antecedent knowledge of which I have been speaking. And there is another truth I wish to impress upon you in respect to this, the first step of your progress: you must take that step completely *here*. If you do not thoroughly learn the structure and functions of the healthy body now, while you are yet students, the probability is small that you will ever know them well or creditably; and if this foundation be laid imperfectly, the whole superstructure raised upon it will assuredly be defective and unsafe. Few of you can ever again command the time, the convenience, the assistance, and appliances, which this large town, and these schools of anatomy, afford you during the season of your pupilage. I say there is small likelihood

of your ever mastering these pursuits in future, and it is absolutely certain that you can do so only at the expense of much toil, inconvenience, and obstruction. Anatomy, therefore, and more especially that mechanical part of it which is so simple, you must resolutely and thoroughly cultivate while you are students, or you must incur the almost unavoidable alternative of uneasy and blundering ignorance respecting it when you come to feel its importance in your practice. This is one of the prominent and definite objects of the map that I would lay before you of the ground you are about to occupy.

I have already intimated, that without this knowledge of the construction and offices of the body and its parts, there can be no safe or rational practice of physic. It is true that without such knowledge, many have applied themselves, and that some do still apply themselves, to the relief of disease; and *that* with much success, and upon the whole with no doubtful advantage to society. It cannot be denied that the imperfect state of the science does admit of this. But it is right that you should know, that such men, who are guided purely by an empirical experience, personal or traditional, of symptoms and remedies, are liable to the most fearful mistakes — mistakes from which a better knowledge of anatomy would have guarded them. And it is not to be doubted that they to whom this aid towards the formation of a right judgment concerning disease and its management is fairly laid open, and who turn from it through indolence, or reject it through prejudice, incur thereby a very awful responsibility. But there is another and an opposite error much abroad in the world at present, and one into which it is in some sort natural that the ignorant public should fall, but against which I would caution *you*, as having a tendency not less injurious than the former,—I mean the notion, that he who is a good anatomist, is therefore, and thereby, a good physician, or a good surgeon. This is much as though a person who had learned to compute the dimensions of a field should, for that reason, be thought well qualified to dress and cultivate the soil. The truth is, that you may have a very perfect insight into the formation of the body, and the uses of its various parts, and yet be entirely ignorant of its disorders: nay more, to the most exact knowledge of the place, and purpose, and relation of every part, you may add an accurate acquaintance with the morbid conditions to which it is subject, and yet neither possess, nor approach, in consequence of such knowledge, one step towards possessing, a single correct notion concerning the medication of those conditions. These are quite distinct objects of inquiry, and they are much more intricate and difficult than those with which anatomy is conversant; yet they must be constantly studied in reference to structure and function. Anatomy and physiology, in their ordinary signification, relate to the *healthy* body in its various phases from infancy to age—from the outset to the close of life; and with these the connexion of the congenerous sciences of *morbid anatomy* and *pathology* is intimate and obvious. Indeed, although for the sake of convenience we separate in some measure the consideration of the sound state from the diseased, you will form a very erroneous conception of these branches of the science, if you look upon them as opposed to each other. They illustrate the same animal economy as seen from different points of view, and under varying conditions: it is very difficult, perhaps impossible, to determine the precise boundaries by which they are divided from each other; and you cannot begin too early to investigate the alterations in structure, and the disturbances in function, which the various parts of the body are apt to undergo, and which constitute *disease*.

With respect to alterations in structure, they will early present themselves to your notice. The examination of the natural composition of the human frame is mostly carried on in bodies that have sunk under disease. You will therefore often meet with morbid appearances, where you are looking for examples of the healthy condition. This casual observation of the traces of disease will chiefly be of use by exciting your curiosity. You will desire to know the causes of these changes, the manner in which they arise, and how it is that they impede or prevent the proper actions of the part where they are found. It forms an important branch of the office of the professor of anatomy to explain these things. He will describe the various deviations from the sound state to which each portion of the body is subject, illustrating his lectures by appropriate specimens, of which a very complete, well-arranged, and most instructive collection is open to your inspection in the museum upstairs. By these oral lessons you will be prepared to follow up the study of morbid anatomy in the only way in which it can be rendered fully profitable; not as a mere department of natural history, but by associating the symptoms of disease with those changes of texture of which in the living body they are the visible and tangible signals. And this leads me to another most important object of medical science — an object that will incessantly demand the best efforts of your minds,—I mean the *recognition* of diseases.

All disease consists in some change or other, produced in some part or other of the body. In a limited number of cases the change is confined to the surface, and declares itself directly to the eye; but in a far greater number the essential change is internal, cannot be seen or felt, and manifests itself solely by certain outward signs and exponents. It is one chief occupation, as it is in truth the main difficulty, of physic, to interpret the meaning of these external characters.

Some diseases there are, of which the symptoms are so constant and peculiar, that no difficulty is felt in identifying the malady, although its hidden and inward essence has hitherto eluded our apprehension. We have to deal with a group of symptoms only; but they are well defined, and afford a substantial object for our study. I may mention the ague, of which the phenomena are known to most persons, as an example of this kind. Others again, of which the inward nature, as marked by material changes, is clearly apparent upon inspection after death, are attended by symptoms that also accompany other deviations from health, totally different from the former both in kind and in situation. Instances of this sort might be adduced from the various disorders that waste the body. It is in catching the distinctive character of such complaints—in disentangling the confusion which springs from their community of outward symptoms—that the prime skill of the practitioner consists. The mistakes that are made in this matter are numberless and deplorable. I believe that the extreme importance of an accurate discrimination of diseases is not generally understood. It is commonly supposed that the identification of a disease leads in some direct manner to the means of its removal or alleviation; but it is not so. Understood in this sense, the proverbial maxim, that the knowledge of a disease is half its cure, is untrue. All that we know concerning the proper treatment of the sick is derived originally from observation, not of the nature of disease, but of the effects of remedies. That rhubarb will purge, and opium lull to sleep—that loss of blood will occasion faintness—are truths which experience alone could suggest, and successive trials alone confirm. The most accurate knowledge of anatomy, the most exact discrimination of maladies, have not the smallest tendency to disclose them; they are purely empirical truths. But when once these effects were clearly ascertained by repeated observation, they became fit subjects for arrangement, analysis, and generalization. Just theory, built upon and growing out of such experience, forms the whole substance of our therapeutic knowledge; and this I take to be the true statement of the question, which for so many centuries vexed the schools, between the dogmatic and empirical physicians. A better philosophy has, however, arisen in medicine. The true value of accurate diagnosis consists in this—that it fixes the objects about which observation is to be exercised, and experience accumulated. Once point out an infallible method of ascertaining the identity of a given disease, and the process of determining its behaviour under the influence of time and remedial measures becomes thenceforward surely, though perhaps slowly, progressive; and so by degrees the recognition of disease *does* lead to its appropriate management. The term experience is obviously misapplied, and the results of all observation are vitiated, when any doubt exists about the sameness of the objects contemplated; and it is mainly to this imperfection in the diagnostic part of medicine that we must refer the uncertainty and variation, both of doctrine and of practice, which have brought so much suspicion and reproach, and ridicule, upon the science.

Within the last twenty years the methods of distinguishing one form of internal disease from another have been wonderfully extended; a new impulse and a juster direction have been given to inquiry, and every department of medicine has already shewn a proportional improvement. Doubtless there are limits beyond which, with our present faculties, we can never hope to pass; but the science of medicine, considered and cultivated under its true character, as a science of simple observation, is capable of reaching a much higher degree of perfection than it has ever yet attained. The phenomena of the living body, and the laws according to which they take place, are not less uniform and regular than those which relate to inanimate matter. They are more difficult, indeed, to seize and to analyze; yet, if studied in the true spirit of the inductive philosophy, if traced by the rigorous deduction of general principles from particular facts sufficiently numerous, and verified by careful and repeated observation—the process being carried on by many minds, and it may be through many ages—they will at length submit themselves to orderly and scientific arrangement. The laws by which disease is set up will become accurately known; the mode and degree in which they may be regulated by external interference will be determined; and although, even then, many disorders will remain irremediable by human skill or wisdom, that, however much to be lamented, will be no dishonour to those whose attainments are limited only by the bounds which Providence has appointed to the art of medicine.

The things which I have spoken of thus

far, as necessary to be known, have all a direct connexion with the human body itself; they are, its structure and its functions — its disorders, and the marks by which these are declared and discriminated. I have dwelt upon them the longer, because it is in respect to those matters which immediately concern the body as a subject of observation, that the great advantages of a well-ordered system of academical tuition are peculiarly conspicuous, and can least of all be dispensed with or postponed.

But you will have to extend your scrutiny, in the next place, to the things by which the body is surrounded, and by which it is capable of being affected. This opens a new and a very wide field of inquiry, comprehending every substance or agent that may exert a sustaining, an injurious, or a remedial influence upon the living man. I should greatly transgress my prescribed and proper limits if I were to enter minutely into this extensive subject; nor is it necessary. It will be enough if I enumerate the several heads under which it is technically arranged, and state shortly their relative claims upon the time and attention of an ordinary student. The particular uses and applications of each will be more fully explained by my colleagues.

Of these less direct or accessory branches of knowledge, the most general is *chemistry*, which investigates the intimate composition, the properties and mutual relations, of all material substances. It is strictly subservient to medicine—1st, in the analysis it furnishes of those things which have either a hurtful or a salutary effect upon the body, as food, medicines, and poisons; 2dly, in the information it yields of the natural composition of the various parts of the animal system itself; and 3dly, in the means it affords of detecting certain deviations from that natural state, which are in truth either diseases in themselves, or most important indications of disease, and guides to its proper treatment.

It is almost superfluous to state the province of *botany*, and the relation in which it stands to the science of medicine. You know that it treats of the history, habits, and qualities of all vegetable substances; and that the vegetable kingdom supplies a large proportion of our most useful remedies.

The department also of the *materia medica* needs but little explanation; it is occupied with a more specific and particular inquiry into the nature of all those substances which, in small quantities, exercise a sensible influence upon the bodily organs and their functions; it describes their qualities and effects, and the modes of preparing them for medicinal purposes. With these inquiries are associated the doctrines of *therapeutics*, which profess to explain the general theory of medicine, the operation of the agents of health and disease, and the principles which direct our endeavours to preserve the one, and prevent or cure the other.

Now of all these subjects of research I may say, that you must obtain as accurate a knowledge of them as you can, without neglecting or slurring over those other subjects, which for the present more urgently demand your attention, because they are indispensable, and because the means of pursuing them will be in a great measure lost to you when you retire from the schools, and the period of regulated pupillage has ended.

To learn chemistry comprehensively as a science, and correctly as a practical art, would require all, and more than all, the allotted term of your studies. You will endeavour to possess yourselves of its leading principles, and note carefully its methods; and in so doing you will keep steadily in view the application of these to the profession you have chosen. The outline thus secured may be filled up in future. Besides its immediate utility, the singular interest that attaches to the pursuit of chemistry will render it a delightful resource in those hours of leisure which will most probably occur to you all.

Botany again, pursued to its full extent, is a boundless study. It will be enough (I humbly conceive) if you here acquire such an insight into its system and its uses, as may induce you, under the more congenial circumstances of a country life, to recreate your minds, and to extend your knowledge and admiration of nature, by its more particular cultivation.

The details of the materia medica may also be very conveniently prosecuted hereafter, if you bear in mind the fundamental lessons of the science, as they will be laid down by its Professor. One point, however, will deserve your especial attention whilst you are here. I need not insist on the importance of an accurate knowledge of the sensible qualities of drugs, as tests of their genuineness and purity, on the part of every one engaged in the general practice of medicine. Few of you, probably, will ever again possess such an opportunity of becoming familiar with these qualities, as will be daily before you in the fine specimens and samples with which our cabinets and museum are stored.

Besides the lectures on these collateral subjects, there are others designed to teach the *art* of medicine—the *application of the science* to its practical ends; or I should rather say, to put you in the most favourable condition for learn-

ing that art and application;—I allude to the courses delivered by the several Professors of the *practice* of *physic*, of *surgery*, and of *midwifery*. To these lectures it is necessary that you should pay particular attention: and it is proper that you should be advised of their precise nature and objects. They are designed to exhibit the science of which they treat in its collective and existing condition. They sketch its history—bring together and set in order its scattered facts—state and discuss its doctrines—condense and simplify its records—point out its deficiencies—and present the whole subject in that clear and summary view which is best calculated to win the student's attention, to excite his interest, to inform his understanding, and to assist his memory. Another object of such lectures is to communicate those practical rules and precepts which experience and reasoning seem to have fairly established.

You cannot fail to perceive the great assistance to be derived from a masterly exposition of this kind; which, by giving a connected view of what has already been done, enables the present inquirer to take a full advantage of the acquired knowledge of past generations, and, like a child raised upon the shoulders of a giant, to see even beyond that limit to which their previous speculation had extended.

There is yet another course of lectures to be added to the list of those which, by the existing regulations, you are constrained to hear—the course, viz. of *forensic medicine*. It is the principal object of these lectures to teach the application of the science of medicine to such judicial questions and difficulties as may require medical knowledge and medical testimony for their solution. The importance of the subject, both to the practitioner and to the community at large, is great, and I should think, obvious. This branch of science, however, supposes and puts to the test a preliminary knowledge of each of the different subjects of which I have already spoken. The attendance upon this course is accordingly directed to be postponed till the second year. I shall merely observe, in conformity with the opinions I before expressed, that I heartily wish it could be postponed to the fourth or fifth year.

You may perhaps imagine, that when this comprehensive scheme of study has been fulfilled, your professional education is at length completed—that having mastered the essential parts of the science of medicine, you will be prepared to go forth, without more delay, to that harvest of active usefulness which was the grand aim of your labours, and for which you have made such careful provision.

This would seem to be a very common notion: but it is a very erroneous and a very dangerous notion. It should always be remembered that the *science* is quite distinct from the *art* of physic. A knowledge of the science *prepares* its possessor indeed, but it does not *qualify* him for exercising the art. Rules of practice may be dictated by the teacher, and committed to memory by the student; but in applying those rules, the most painful embarrassment, the most pernicious blundering, may and will perpetually occur, unless a long apprenticeship has been served to the art itself. It is necessary that the practitioner should *begin* with some acquired sagacity in the investigation of diseases, and with some acquired address in their management. These qualities neither books nor lectures are able to communicate; yet without them the earlier years of our practice must be full of peril—as well to the lives of those who confide in our skill, as to our own reputation and peace of mind.

There are many things which can be learned by our personal observance only; and the very faculty of observing requires to be formed, and the senses whereby we observe require to be disciplined to that end. The eye must be *accustomed* to read the signatures of disease which are often legible in the features, the attitude, the gait and manner of the sick person; to discern and to discriminate, what can never be adequately described in words, the various directions for our guidance which present themselves in the tongue, the general surface, the excretions of the body. The sense of touch, by which alone we ascertain the qualities of the pulse—the character of certain tumors—the nature of various accidental injuries—the condition of many unseen parts—requires to be *educated* for those especial purposes. The ear, when long and diligently tutored, will detect the existence, and interpret the nature, of some very serious diseases, that disclose themselves to no other means of investigation: but it yields no information, or may lead to fatal error, if confidence be placed in its uninstructed sensations. The same remarks apply, in a less degree, even to the senses of smell and taste. There are numerous circumstances, also, relating both to diseases and to remedies, which are unnoticed in books or lectures; which, in truth, are incommunicable; but which yet require to be seen and explained: and it is exceedingly desirable that all, even the most trivial manual operations, should be repeatedly witnessed, and even performed under proper superintendance; and that some degree of composure and presence of mind should be acquired by the familiar sight of bodily

suffering, before the active duties of the profession are undertaken in their undivided responsibility.

Now this kind of previous expertness and practical skill, and self-possession, can be obtained only by watching disease, under the guidance of those who are habitually conversant with it; in a word, by daily attendance at the bed-side of the sick, in the wards of a hospital. Here the student may try his skill in distinguishing diseases, and exercise his judgment in devising measures for their relief, secure from any evil consequence of a wrong decision. Here he may see that done before his eyes which it will soon be the daily and hourly business of his life to perform. I deem it one amongst the chief excellences of this institution, that the medical students, without being restricted in their choice to any particular hospital, have yet the opportunity of following their teachers in each department, from the lecture-room to the sick bed; of verifying, by the evidence of their own senses, the fidelity of the lecturer's descriptions; of witnessing the actual illustration of his doctrines—of testing his precepts by appropriate instances; and of asking him questions in all cases of doubt or obscurity. This constant reference to fact and example heightens wonderfully the interest, and ensures the profitable application of the oral lesson. Nor is it in those lectures alone which are intended to accomplish the advanced student for the practice of physic or surgery, that the advantage is manifested of an early familiarity with the events of a hospital. It is scarcely less felt with respect to the more elementary branches. A pupil in whose presence a living artery is tied—who sees the gushing blood staunched at once, and a fellow-creature snatched from inevitable death by a procedure so simple—carries with him, to the demonstration of the blood-vessels, a readier apprehension and a memory more tenacious of what he hears; he will inspect with a livelier interest the curious organization of the brain, if he has witnessed, on the same day perhaps, the sudden suspension of its mysterious functions by a stroke of apoplexy, or looked upon its broken texture in the terrible but instructive revelations of the dead-house. It is this easy passage from the class-room to the sick ward, on the part of the pupil—this continual elucidation of theory by practice — this daily union of scientific with clinical teaching on the part of the professor — which forms the true bond of utility between a medical school and a hospital; and provided that such relations exist, and such free intercourse be practicable between them, it is clearly a matter of comparative indifference whether the buildings in which these distinct processes are conducted be distant fifty or five hundred yards from each other.

I have already directed your attention to the great advantage of associating the study of the living symptoms of disease with that of the dead morbid appearances. There is no place where this can be done half so well as in a hospital or infirmary. But since few can reckon upon having access to such store-houses of observation, after they encounter the cares and distractions of active business, so few can possess any useful knowledge of morbid anatomy who neglect the hospital while they are pupils. Private practice alone, however extensive it may be, affords but scanty occasions for this pursuit. The very hurry of such practice is an obstacle. Examination of the dead body in private houses, even when it can be compassed at all, is attended with much inconvenience and restraint. Respect for the feelings of surviving friends must often prevent any application to them upon the subject; and those feelings—prejudices, some would call them—are often successfully opposed to the desire of the practitioner, when it is expressed.

It is fit, moreover, that you should be apprized that a person whose practical knowledge of pathological anatomy is slight, and who has not been warned by others, more experienced than himself, of the sources of fallacy to which the observation of morbid appearances is obnoxious, will be in danger of drawing wrong conclusions from what he occasionally does witness in the dead body; conclusions, too, which may affect his future plans of treating some disorders. For example, he may easily mistake the effects of disease for its causes; or he may look upon changes that take place during the agony of death, or even afterwards, as evidences of previous disease, where none really existed.

It is an additional, though an incidental, advantage of this watching of disease, and tracking its vestiges after death, that it is a continual illustration of physiology. The uses of a part, previously unknown, are oftentimes disclosed by the operation of disease, which spoils its structure, and stops or disturbs its action. Although the functions of the body are to be explained when its entire and healthy mechanism is taught, yet you may frequently obtain a more sure and striking insight into those functions while engaged in pathological researches. Strictly speaking, physiology may be said to include pathology; but that part of physiology which is conversant with the workings of disease is the most

interesting, and the most informing part. You know that the uses of various portions of the body are discovered, among other means, by experiments made upon living animals; but it would be impossible, and if possible very wrong and cruel, to repeat these experiments yearly for the instruction of pupils. It is enough if the facts on which the conclusions are built be narrated to us by trustworthy men, who have themselves instituted these painful trials. But the operations of disease may be considered as so many experiments in the living *human* body; and when you are prepared to understand and interpret them, they proclaim some of the most important truths of physiology.

Hospital practice, then, gentlemen, for all these reasons, prefers the strongest claims upon your diligence and attention: it cannot be sought too soon; it can scarcely be followed too long. A brief or a slovenly observance of it will be of but little use to you. For my part, I am convinced that this is of incomparably more importance than any other single thing to which, as students of medicine, you may desire to apply your minds: I fear it is the most neglected. It is in this period of your studies, if at all, that something like an apprenticeship would be truly useful.

Such, gentlemen, is a very general sketch of the principal matters wherewith you are soon, and for a long period, even the period of your lives, to be engaged. I have spoken of them to you, as to persons desirous of becoming members of a liberal and scientific profession, rather than mere followers of a gainful trade. I have thought them peculiarly deserving of your attentive consideration; for you are commencing your course at a very remarkable period. Until the time in which we live, no systematic attempt had been made in this country to extend to the great mass of the profession the advantages of general learning and science, in their natural connexion with the study of medicine. The means and facilities for this most desirable union, that are offered by such institutions as this in which we are assembled, had never been generally accessible in England —had never even existed in its metropolis, although students from every quarter of the kingdom, and from most parts of the globe, were annually crowding to its schools for instruction. The changes that are now in active operation around us cannot fail to exercise a wide—I hope and believe it will be a salutary—influence upon the progress of the science, and upon the medical character. As yet, indeed, it is left to the discretion of the student whether or no, and how far if at all, he will profit by the combination; but the time cannot be far distant when authority will interpose her kind constraint to protect him from the dangers of an erring or an idle choice. But whether this shall happen soon or late, the more active and worthier spirits of the rising generation will gladly, and from the beginning, seize upon the advantages of this comprehensive scheme; and in whatever measure they shall be found to conduce to the skill, the reputation, and the success of the studious, in the same proportion will their neglect be followed by discredit and failure. In that contention of the intellect which marks the present condition of society, no one can with prudence forego any aids that may be placed within his exclusive reach—still less those which are open to all, and will be eagerly grasped at by numbers. The mere widening of the road will lead many to the temple of knowledge, and others will be compelled by their example. It may reasonably be hoped, too, that the same association of medicine with literature and science will effect the extension of useful knowledge in the opposite direction, and create in the general student a desire to look into a branch of science which so nearly concerns him. Nothing would more encourage the honest pursuit of physic; for nothing would tend more to discountenance ignorance and quackery. It would be impossible for any educated and intelligent person, even moderately conversant with anatomy, and with the manner in which disease is set up or repaired, to be deceived by the gross and cruel cheats that are daily practised upon the public by knavish impostors. And what, to any man, can be more full of interest, or a fitter subject of rational curiosity, than the formation and composition of that remarkable portion of matter, which, if it do not strictly constitute his very self, is the medium that so mysteriously connects him with the surrounding universe—the present instrument and tabernacle of his undying spirit. Nor are such inquiries merely curious and interesting: they are pregnant with lessons of the deepest wisdom. Hitherto, indeed, I have spoken of your professional training only—of those things which should accredit you for the right performance of your worldly calling; but I should ill satisfy my own sense of duty, and do great injustice to the principal theme of this discourse, and of your future study, if I did not touch (however briefly and imperfectly) that loftier train of speculation and feeling to which it naturally conducts. I know not how any one can survey, with an understanding eye, the wonderful mechanism of the animal frame, without having his thoughts raised to the contemplation of its Almighty Builder. It has been thrown as

a reproach upon the profession of medicine, that the tendency of its pursuits is to generate a spirit of scepticism and irreligion. Gentlemen, I believe this charge to be as unfounded as it would be unaccountable if it were true. Instances indeed there have been, and some of them have been made unfortunately prominent, of such perverseness of the human intellect—

> "——— sunt, qui formidine nullâ
> Imbuti spectant:"

but the *natural* tendency is strongly the other way; or if the subjects into which we inquire be dangerous at all, they are chiefly so to those who bring to them no suitable preparation of the mind or culture of the intellect—who come with preconceived notions, and that partial knowledge which serves only to foster pride and self-conceit. Such men would have been equally blind in whatever direction they had turned their eyes. They are sceptics, or atheists, not in consequence, but in spite of the evidence which anatomy unfolds before them. The real effect, I repeat, of these studies upon a healthy understanding, is to inspire the firmest conviction of a presiding Godhead. You will become acquainted with so many and such palpable examples of forethought and design—of consummate wisdom compassing the most excellent ends by the wisest means—that if you trace not in them the workmanship of an infinite intelligence, you may well suspect some defect or some distortion of the faculty of reason in yourselves. It is in the animal body that the great teachers of natural theology have ever found their most prevailing argument. In the admirable work of Paley on this subject, the whole demonstration is complete and irresistible. His volume should be daily in your hands while you are engaged in practical anatomy, as a most valuable commentary upon the marvellous things you will then behold. A living writer, of great power and eloquence, has explained (even more clearly than Paley had done) the reason why the study of the animal structure is more adapted to demonstrate the existence and chief attributes of a God, than the contemplation of external nature. Dr. Chalmers draws an important distinction between the *laws* and the *dispositions* of matter, and shews that "it is not so much in the establishment of certain laws for matter that we discern the aims or the purposes of intelligence, as in certain dispositions of matter that put it in the way of being usefully operated upon by the laws. Insomuch, that though we conceded to the atheist the eternity of matter, and the essentially inherent character of all its laws, we could still point out to him, in the manifold adjustments of matter, its adjustments of place, and figure, and magnitude, the most impressive signatures of a Deity."—"It is passing marvellous," he elsewhere observes, "that we should have more intense evidence for a God in the construction of an eye than in the construction of the mighty planetarium; or that, within less than the compass of a hand-breadth, we should find in this lower world a more pregnant and legible inscription of the Divinity than can be gathered from a broad and magnificent survey of the skies, lighted up though they be, with the glories and the wonders of astronomy."

Thousands of these strong evidences of design, and of a Mighty Designer, it will be your privilege to inspect and to contemplate. Let not these, the more excellent uses of your studies, be overlooked or forgotten in the pursuit of those ends which are more immediate and professional; lest to you should become applicable those fearful words, "hearing, they shall hear and shall not understand; and seeing, they shall see and not perceive."

Nor is it less a subject of thankfulness, if rightly viewed, and of heavy responsibility, if suffered to pass unheeded, that the vocation wherein you will be engaged when the period appointed for study has ended, is so full of practical and solemn admonition. Habitually conversant with death in its various forms, as it comes by sudden surprise, or creeps by slow gradation, upon the youthful and the aged alike, *you* surely should learn to look upon the things of this life with a just sense of their uncertain tenure, and of the use and value of opportunity. In the house of sickness and mourning, many a golden occasion will offer itself for the exercise of charity and kindness; many an affecting lesson be read of patience, fortitude, and resignation. Familiar with the sight and the expression of bodily pain, and taught by such experience how slight a derangement may fill the frame with agony, you will yet remark, in thankful admiration, the vast preponderance of ease and actual enjoyment in the world: and should you be stirred to the vain inquiry, how *any* pain or evil should find admission among such prevailing indications of beneficent wisdom, and be driven (as I think you must) to the conclusion, that this apparent inconsistency is necessary to the general perfection of the great system of the universe, of which we see so small a part, you will at the same time be struck by observing how large a proportion of human suffering, physical as well as mental, is the fruit of human vice and folly. Above all, you will have more opportunities than fall to the lot of most men, of estimating the efficacy of a well-

spent life, and the power and consolation of a religious hope to soothe and to sustain "the ending of mortality."

But it is time that this address should close: and I would end as I begun, by urging upon you the paramount importance of that portion of life upon which you are even now entering. I would entreat you to bear in mind, that, short as the period of your pupillage must necessarily be, it will not fail to give a tone and character to the remainder of your existence; that it will form the hinge upon which the credit and usefulness of your professional life in particular must altogether turn: and I would exhort you to measure the worth of your present opportunities by the greatness of that trust for which they are designed and calculated to fit you.

Dr. Johnson, in his Rasselas, has described the deep anxiety of the astronomer who supposed himself in possession of the power to regulate the weather, and to distribute the seasons. How much more reason have we to be impressed with a sense of our responsibleness, who *do* intermeddle, and frequently with means very powerful for good or for evil, in regulating the movements and vital actions of the human body; upon whose knowledge and judgment must often hang the comfort or the misery of whole families—the bodily ease or pain, nay, the very life itself, of our afflicted and confiding fellow-creatures?

INTRODUCTORY ADDRESS,

DELIVERED AT

THE OPENING OF THE MEDICAL SCHOOL OF GOWER-STREET,

October 1, 1833;

BY DR. GRANT.

GENTLEMEN,—We open the sixth session of our medical school with prospects equally gratifying to the profession as to those interested in the prosperity of this establishment. The ruinous expenditure with which the University commenced its career has been greatly reduced, and, by recent internal arrangements, it is now brought within its present actual income. New chairs are proposed and announced, and new lectureships will commence this winter. The whole system of management in relation to the students, the lecturers, the professors, the faculties, the senate, and the council, has been carefully planned and organized. Several important improvements have been made since last session, both in the interior and exterior of the building, and additions to our libraries, apparatus, drawings, and museums. The inconvenience of teaching two extensive analytical departments, requiring much apparatus and means of illustration, in the same theatre, has been remedied by the arrangement of a new theatre, expressly for the class of materia medica, in which the whole of the rich materials for that branch are placed constantly before the eye of the student. The Juvenile School, the success of which last season, with imperfect accommodation, surpassed the most sanguine hopes, has been accommodated with new and spacious apartments within the University, thus forwarding the internal completion of the building; and it is reasonable to expect that the prosperity of this part of the establishment will prove beneficial to the medical and general schools, by sending up students to these departments—if the general school of the University is not allowed to sink into a school for children. The Dispensary, hitherto maintained at considerable expense, and the only means we possessed of communicating clinical instruction, will now soon be relinquished for the hospital adjoining the University, which has been entirely built since the close of the last session, and now only waits for its internal furnishing to receive patients. The opening of the North London Hospital will be the commencement of two important departments of our medical curriculum—clinical medicine and clinical surgery, with hospital attendance. The debts of the establishment, which last winter excited some anxiety regarding the stability of this school, have all been paid off, as you have seen by the public journals, by a loan of 4000*l.* on a mortgage of property for five years; and it is confidently expected, from the increasing prosperity and reputation of the schools, and the plans of rigid economy introduced, that it will be redeemed within that period, and the future existence of the whole placed on a more solid foundation. But in case of difficulties, is it unreasonable to hope, that, in subscribing for its erection, half the nobility, and power, and wealth of England, are pledged to prop this monument to the genius of the times? The subdivision of labour in the medical school, the extended courses of instruction given on every department of medicine, and the ample means of illustration we already possess, place this part of the institution, at present, on an equality with that of any other British university in these respects; and an application has lately been made to parliament, by a zealous and learned member of our council and of the legislature, to petition his Majesty to grant to this house a charter, with

the power of conferring degrees, as enjoyed by the endowed universities of the kingdom. This appeal has met with a most favourable reception in the House of Commons, and its object is said now to be under the consideration of the advisers of the Crown.

The Royal College of Physicians of London exercise an exclusive power over the profession, which is injurious to its interest, and an unjust oppression. No physician can demand an examination for a Fellowship in virtue of any degree but that of the imperfect medical schools of Oxford and Cambridge; and no student can obtain a degree in these two Universities unless he sign the thirty-nine articles as a member of the church of England. Thus the object of such a college is absurdly perverted, and very few of the eminent physicians of England can obtain a Fellowship, or expect to enjoy those advantages and privileges which are attached to it. Forty-nine physicians of known reputation, practising in London, including the heads of most of the medical schools of the metropolis, excepting King's College, have petitioned the House of Commons to inquire into this and other abuses of the profession, and generally into its present state throughout the country, with a view to the framing of such laws as may remove the existing evils, and place the medical institutions of this country on a more liberal and equitable basis. Petitions, to the same effect, have been presented from other parts of the kingdom. A committee of inquiry has been appointed by the House of Commons, and the affairs of the medical profession are now in the hands of a scrutinizing and equitable legislature, which will retain whatever is good in the institutions of old times, and correct whatever abuses are sanctioned only by custom or neglect. So that if privileges are to be granted to this school, either as a part or the whole of a great metropolitan university, they will be founded, not on special favour, or the caprice of the times, but on a full and candid examination of its comparative and intrinsic merits, and on the broad principles of reason, expediency, and public good; and it is to be hoped they will be in accordance with the present enlightened condition of society, and the liberal and tolerant principles of the age. Those, therefore, to whom I now chiefly address myself, who are about to commence their medical education in this establishment, have reason to be gratified with the prospects of the school they have selected, and to congratulate themselves on the light of reform and improvement which begins to dawn on the profession they are about to enter—a profession, the study of which, under all circumstances, presents a vast and varied field for the exercise of the mental powers,—whose pursuits are calculated to awaken the finest feelings and the noblest endowments of our nature, and the practice of which is peculiarly calculated to promote happiness, by removing or alleviating the sufferings of humanity.

The task you are about to enter upon is the most serious of your life, as ours is the most responsible. The education of youth, indeed, is the most important subject which can occupy the human mind—it is the basis of individual happiness, and of the rank and usefulness of man in society; it develops and cultivates those powers which distinguish him from the brute—it stamps the character of an age, and constitutes the chief distinction among men and among the nations that are or have been on the earth. An extensive and well-directed general education, by cultivating and improving the mental faculties, storing the mind with the materials of thought, and training it early to habits of study and reflection, forms a most valuable introduction to professional pursuits, and a solid foundation for professional fame. This early preparation, so valuable in all the learned professions, is of essential importance in the study of medicine, whose objects and pursuits are so numerous, extensive, and varied.

The youth destined for this profession, who is yet only acquiring a knowledge of the Latin language, is not merely obtaining the means of enjoying in after life the literature of the ancient mistress of the world; he is acquiring the language in which half the works of his future profession are written—the language he must daily employ in his prescriptions and practice—the language from which the technical terms of anatomy, surgery, and the half of medical science, are derived; and by studying its structure, its combinations and decompositions, he is training the mind to the processes of analysis and synthesis so important in all the analytical parts of medicine—as chemistry, pharmacy, and medical jurisprudence.

The nomenclature of chemistry, botany, and some other branches of medicine, is derived chiefly from the Greek, whose simplicity and vocal harmony admirably suit it for this use; and an acquaintance with that rich and beautiful language is thus valuable to the medical student, not only as a key to the pure fountain of science and literature among the Greeks, and to the writings of Hippocrates, Aristotle, Galen, and other fathers of medicine, but also to enable him to comprehend the descriptive language of the scientific medi-

cal works published throughout Europe at the present time.

Although the study of the dead languages is a valuable part of the student's education, in giving an early discipline to his mind, in cultivating his taste by the purest models of literature, in affording him access to all that is most curious and interesting in the history of his profession, and in interpreting its technical language, the useful knowledge to be obtained through their means falls infinitely short of that to which he can obtain access only by an acquaintance with the modern languages of Europe—particularly the French and German. The number of flourishing universities and medical schools on the continent, and the numerous improvements they are daily adding to science, now render it, indeed, impossible to keep pace with the rapid march of discovery in any department of our profession, without some tolerable acquaintance with the modern languages. But there is no language which the student of medicine is more apt to neglect, or requires more, than his own; which he has constant occasion to use in the various writings and correspondence of an active professional life.

In a science like medicine, so replete with subjects of speculation and conjecture, that precision of thought acquired by cultivating the sciences which treat of quantity and figure, is most valuable: and independent of the value of the mathematical sciences, in teaching the mind to think and to reason correctly, they have many direct applications to particular branches—as to the analytical parts of chemistry. The numerous useful applications of natural philosophy, of optics, acoustics, mechanics, hydrostatics, and other branches of that vast and practical department, are so obvious, that in a liberal plan of medical education that ought to enter as a necessary part. Without its aid, half the beauty of animal structure is undiscoverable, and half the science of physiology unintelligible. It stands beside chemistry in its relation to medicine and to the light which it throws on vital phenomena, and its facts and principles are alike applicable to the healthy and the diseased conditions of organization.

There never was a period when the philosophy of mind, and the art of correct reasoning, were more important to the medical student than the present, when the most discordant opinions divide the profession regarding the phenomena of sensation and thought, the nature of volition and mental emotions, the functions of the brain, and the whole constitution of the human mind.

Although medicine is replete with subjects of abstruse investigation, requiring a mind well disciplined in the abstract sciences, the practice of the profession makes constant calls on our acquaintance with the resources nature contained in the properties of the natural objects around us. In combating disease, we seek aid from every kingdom of nature. From the mineral kingdom we derive an immense number of powerful agents, possessing the most diversified properties; the vegetable kingdom contributes largely to the materia medica; and many remedial agents of great power and efficacy are taken from the animal kingdom. Not only do the studies of mineralogy, botany, and zoology, contribute to enrich medicine with numerous effective remedies for the evils that flesh is heir to, but even geology throws the greatest light on medical statistics, or medical police, an important part of medical jurisprudence.

An acquaintance with these general departments of knowledge should form the basis of a medical education; and to insure the usefulness and respectability of the profession, the highest honours in medicine ought to be granted only to those who have obtained previously some testimonial of proficiency in general acquirements. This College and King's College differ from the other medical schools of the metropolis, in presenting the student with the means of obtaining a knowledge of these preliminary branches while pursuing his medical studies, without quitting the walls of the establishment; and you who are but commencing your career I would venture to remind, that as yours is still the period to store up intellectual treasures, more imperishable than worldly, for future life, you should avail yourselves of the means that are now before you to supply the deficiencies of your early education, or hereafter, in the army or the navy, in the provinces or in remote colonies, in the bustle of an active life, you may in vain regret the last opportunity you have lost.

A curriculum of professional study comprehends not the preparatory studies, but those professional departments only which the student is required to attend before he can obtain some testimonial or diploma; and in this institution the curriculum unanimously proposed by the Medical Faculty for the diploma of "Master in Medicine and Surgery," comprehends only the subjects taught by the professors of that Faculty. The subjects of the course of study it prescribes are intimately connected with each other as parts of a whole; and a methodical order in their study tends much to facilitate their acquisition.

Anatomy and chemistry derive very little aid from other branches of medicine, but throw the greatest light on all the

higher departments; they obviously point themselves out as the most elementary and isolated departments of the curriculum, and their study should be accompanied, not by the higher branches of medicine, for which the student has yet received no preparation, but by some of the higher branches of general knowledge. Comparative anatomy supposes a previous knowledge of human anatomy, the subject of constant comparison. The simplest operation in surgery can neither be comprehended when described, nor understood when seen, without an acquaintance with the structure of the part; and this knowledge is equally necessary to comprehend the seat or nature of any internal disease. The study of human bones and muscles, and other parts of our frame, to which the young student is soon introduced, is often commenced with feelings of natural repugnance; but the beauty of perfect adaptation which he sees in every part, and the professional importance he finds attached to every the minutest point of the structure, soon change these feelings for those of the liveliest curiosity, interest, and admiration. To behold the complex structure of our solid frame-work, and the means by which its parts are held in connexion, and enabled to move smoothly on each other; to study the complicated machinery by which all the motions of the body are effected, and the curious apparatus provided to give it cognizance of outward nature; to examine the instruments by which it converts foreign matter into its own likeness, and the hydraulic apparatus to convey it for the nourishment of all the parts; to study the beautiful means provided to bring the restoring element without largely in contact with the fluids within, and the organs by which new compounds are formed from the circulating fluids, or the decayed materials are removed from the system; to penetrate those mysterious arrangements by which his race is perpetuated on the earth; in short, to behold how fearfully and wonderfully man is made, is calculated to present the student with themes of the most interesting reflections, to gain his heart to his study, and to open his mind to the purest feelings and sentiments of religion.

As a knowledge of the healthy structure of our frame is the basis of morbid and comparative anatomy, the parent of the arts of design, and the key-stone of surgery, so is chemistry the foundation of pharmacy, and essential to the study of medical jurisprudence and of physiology. Even anatomy borrows from it a knowledge of the composition and nature of the fluids and tissues of our body; but chemistry, shining with an unborrowed light, spreads its lustre over half the physical sciences. Confining its inquiries to the phenomena which result from the motions of invisible atoms at insensible distances, its field of research is limited only by the boundaries of the material world. The heat and light of the comet that seems to shoot beyond the starry firmament, the meteors of the heavens, the artillery of the clouds, the atmosphere that encompasses the globe, the waters that bathe its surface, the solid earth itself, and the processes of its hidden laboratories, are as much the domain of the chemist, and as rigidly obey his laws, as the complex living processes performed in the laboratories of human beings, from man to the humblest lichen. What a mine of research is opened to the student by this delightful study! It is no less important among the sciences for the innumerable useful applications of its results, and the splendour of its discoveries, than it is satisfactory to the mind from the certainty of its evidence, and gratifying by the beauty of its experiments.

The student's mind, familiarized with human structure, and enlarged by chemical research, begins to reflect, that to know man isolated is to know him but half; that our knowledge of things is mostly relative; that he cannot compare while he knows but one term of the comparison. Our species is one of half a million of organized beings; and to know the true character of man's organization, and his place in the scale of nature, is to know something of the degrees of that scale. Knowing the structure of man's brain, or heart, or eye, or ear, or hand, the student can perceive nothing of superiority, nothing peculiar, in them, till he has compared them with the range of forms presented by these organs in nature, and perceives why each form is best in the combinations of structure which accompany it. He traces in comparative anatomy the human organs coming successively into being, and rising in complexness, from the monad through all the grades of animal existence; and discovers by the close resemblance which exists between the transient forms presented by man's organs during their development, and their permanent or adult forms in inferior orders of animals, that the plan of organization is every where the same, and man is the climax of its development. Extending his view to the remnants of organic beings embalmed in the earth, he finds that this kingdom has itself been gradually developed, from simple to compound; that its roots are lost in the depths of the earth, and its extreme branches only are visible on the surface. This extensive study is here considered under three great divisions: the first treats of the composition and properties of the fluids and tissues of all animal bodies;

the second describes the structure of the several organs and parts of animals; and the third treats of the uses or functions of these parts, thus constituting the departments usually termed, general and descriptive anatomy of animals and animal physiology.

Seeing the imperfect knowledge of man to be derived from studying man alone, physiologists in all ages have sought to comprehend and illustrate his vital economy, by studying that of inferior animals; and their labours have thus been rewarded by the discovery of the circulation of the blood, the lacteal vessels, the thoracic duct, the lymphatic absorbents, the principle of galvanism, the functions of the nerves, and many others, which have changed the whole face of medical science. Comparative anatomy, like chemistry and botany, spurning its origin as subservient to man's economy or to medicine, has assumed an independent rank among the sciences, and has extended its influence over zoology, geology, and the fine arts.

From the structure of man and animals the student passes to that of plants, to the study of botany, one of the most extensive and pleasing departments of the medical curriculum, and one which has long been cherished and protected in our universities and medical schools, by the regulations of public bodies and the guardians of education. Treating of the *structure*, and *functions*, and *history*, of vegetables, it stands in the same relation to medicine as comparative anatomy, animal physiology, and zoology, taken collectively, which have never been protected by our profession. The first development, and the lowest conditions of the organs of vegetative life, the phenomena of life exhibited by the simplest forms of organization, the nature and functions of the vegetable tissues and vessels, the phenomena of circulation in the cells, the endosmose of the roots, the motions of the sap in inert vessels, the respiration of the leaves, the signs of sensibility, the whole phenomena of fructification and germination, the influence of external agents on the vital phenomena of plants, and on vegetable forms, the laws which regulate their physical and geographical distribution, and whatever relates to the living economy of this vast kingdom of nature, is calculated to enlarge the views of the comparative anatomist and physiologist. The principles of classification, as applied to vegetable forms, and the history of the families and species, form an indispensible preliminary to the study of materia medica. Although medicine is thus largely indebted to the delightful pursuits of the botanist, botany is so little subordinate to physic, that, in all countries, it is a favourite study with men of every calling; and the most distinguished botanists of our own country have seldom belonged to the medical profession, as Brown, Hooker, Greville, Lindley, Arnot, Bentham.

The living functions of plants and animals are the province of physiology, which examines the processes by which foreign matter, introduced into these living laboratories, is converted into their own likeness, the manner in which they are affected by surrounding nature, and the means by which they continue their race. Resting on anatomy, human, comparative, and vegetable, and using the light of natural philosophy and chemistry, it examines the machinery in a state of action, to determine how far each part contributes to the general result; and by accurately defining the healthy function of each organ in the general vortex of life, it paves the way for the study of pathology, which considers them in a state of disease. It is here divided into three departments, vegetable, animal, and human physiology, which are considered separately in the classes of botany, comparative anatomy, and human anatomy.

Accident and experiment, more than reasoning, have pointed out many mineral, vegetable, and animal substances, which exert peculiar, and often extraordinary powers, when taken into the living body—powers by which the vital functions are variously modified, the fluids altered in composition and properties, and the textures of the organs changed or destroyed. These are the chief instruments employed by the physician to check the progress of morbid actions and restore the healthy; and as each exerts, under similar circumstances, its own peculiar action, they can be classified according to their properties, and their degrees of activity can be determined with precision. Hence have arisen that extensive and important department, materia medica, which treats of the properties of medicinal agents; the art of pharmacy, by which they are procured from nature, and prepared for administration; and therapeutics, which explains their mode of action on the living frame. This study constantly directs the student's knowledge of chemistry to practical purposes; it changes empiricism to science; and gives to the medical student a new interest in the study of the three kingdoms of nature.

The student who has seen all parts of the human body demonstrated and described, and in his private study has diligently kept pace with the professors of the elementary departments, is prepared to take the scalpel into his own hand, and, under the guidance of the Demonstrator, to print in his mind by actual dissection the form, structure, appearance, and rela-

tions of every part. In the dissecting-rooms he studies not merely the parts prepared by himself, but those of all his companions: the anatomical, physiological, and surgical relations of every part are practically demonstrated, and are repeated in a continuous course of demonstrations, so that by this most valuable part of his studies, he is not only prepared to follow the minutest details of surgery, pathology; and the higher practical branches, but is enabled to satisfy himself regarding all obscure points which may be the subjects of discussion in his other classes, or in his private reading.

By thus becoming familiarized with the healthy structure and functions of the body, the best foundation is laid for the study of the diseased, and of all the practical branches connected with the morbid condition of parts. The origin and nature of those changes of composition and texture to which every organ is liable, and which form the prelude to changes of structure more seriously affecting their functions, or altogether destroying them—the characters by which all derangements of structure are determined and distinguished, and their effects on the functions and the whole economy—are subjects belonging to morbid anatomy, a department which obviously tends to substitute demonstration for conjecture in the theory of disease, and to lay a solid foundation for rational practice, but one which only the discernment of our own time has recognized as a necessary and independent part of a medical curriculum. As the pathologist extends his inquiries alike to the external and internal organic derangements, his discoveries are alike important to the surgeon, the physician, and the medical jurist. His knowledge of healthy structure may teach the surgeon how to operate, but when to operate he must learn from the diseased.

The skilful administration of internal remedies or external applications can often change the internal diseased structure of an organ, and restore its healthy condition; but when the morbid part resists all such means, and must be removed, it calls for the last resources, and often the boldest triumphs of the healing art. The surgeon is trained to view the living and the dead, the healthy and the diseased, with equal self-command. In the dissecting-room and the theatre he is familiarized with the use of all instruments, and the structure of the part he is to cut. By the study of morbid anatomy, he has lost all feeling of disgust at the sight of diseases the most hideous; that tyro's feeling is changed for one of a more abstract character; he sees in them only peculiar conditions of the cellular tissue, increased action of the absorbents, increased vascularity, turgescence of the veins, vitiated secretions of the capillaries, fine specimens of rare or nondescript appearances, or beautiful confirmations of some favourite theory; and that philosophic calmness is most invaluable to him at the moment when death every where surrounds his knife, and he is endeavouring to convey all his knowledge to its point. The operations of surgery may be viewed by the physiologist as experiments on the powers of the living frame. The study of this department points out the practical utility of every part of anatomy, and also of materia medica, physiology, and other branches, and it opens to the mind prospects of usefulness and sources of the most exalted enjoyment—the successful performance of operations deemed impossible—the saving of a bosom friend from certain death—the restoring a valuable member to society, or a patriot to his country—the inspiring of confidence in the field of battle. As the student in the dissecting-rooms tests the value of the instructions received in the theatre of anatomy, so by the clinical part of surgery he is made to perceive in the wards and theatre of the hospital the truth of the doctrines explained in the class-room.

To the inexperienced observer, half the evils that afflict our frame produce no outward sign; but the experienced physician reads in the posture of the body, the state of the breathing or the breath, the colour and expression of the face, the eyes, the tongue, the lips, the condition of the skin, the excretions, the pulse, the sound of the stethoscope, and a thousand minute circumstances, the whole progress and workings of the hidden malady. His penetrating eye sees through the body, examines each organ, ascertains the advance and the whole disposition and force of the enemy, plans his mode of attack and the forces he has to employ, and with the promptitude of a general trained in the field, he darts on the foe at his most vulnerable part. This quick perception and interpretation of the outward signs, and ready determination of their causes, effects, and antidotes, is not the work of genius or inspiration, but the slow result of long and well-directed study and observation of all that relates to the healthy and morbid conditions of the human frame;—it is the gift of a mind developed by polite education, stored by a liberal career of professional studies, and corrected by the careful observation of all forms of disease, and particularly of such as affect the constitution at large or the deep seated organs. The department termed the Principles and Practice of Medicine conveys to the student the fruits of this experience, and explains the general principles which can be with safety

deduced from it, as regards the characters, the origin, the causes, the indications, the effects, the remedies, and the whole history of such diseases. Clinical medicine, like clinical surgery, is that by which the student learns at the bed-side of the patient the truth and value of the precepts and theories explained in the class-room, and is the best preliminary to his entering on the responsible duties of a physician.

Detached from physic and surgery, yet partaking of both, is the province of the accoucheur—Midwifery and the Diseases of Women and Children, a department which involves the most intricate parts of anatomy and physiology, the nicest and the boldest operations of surgery, and the most perplexing and difficult cases of the practice of medicine. The whole uterine system, and the changes it undergoes—the phenomena of impregnation and conception—the development of the embryo, and the systems of the fœtus—the diseases of pregnancy—the difficulties of labour, and the operations required to assist it—the ambiguous maladies incident to the puerperal state—the theory and phenomena of menstruation—the critical diseases of infants and children—are among the subjects to which the student's attention is directed in this extensive field of study and practice. Having for its subjects the fair sex and the helpless infant, it is in study perhaps the most gratifying department of the profession, but in practice the most trying to the heart, the mind, and the body.

The highest branch of the curriculum, the most responsible department of the profession, and one requiring the most extensive and varied attainments, is certainly Medical Jurisprudence—a department of modern date, closely connecting medicine with legislation, and which has arisen, like laws, from the vices of men. The vices of Nero, Caligula, and Caracalla, have been surpassed by the refined enormities of our own days. Society, which developes the powers of man, gives refinement to vice as well as to virtue; and in proportion as vice has become more cunning, the searching law has redoubled its energies to hunt it out. Poisoning, suffocation, burning, secret wounds, starvation, torture, suicide, rape, hanging, drowning, infanticide, are among the prerogatives of our species, and the subjects of study for the medical jurist. How many a victim has sunk unheeded into the grave, and left the murderer to steal unsuspected through the rest of life. But now the carcase, gone to shreds, can be made to stand in appalling judgment against the murderer, and render him the poison grain for grain. Medicines are poisons, and the more virulent the more valuable in skilful hands, which can make them act like magic on the most stubborn frame; but ignorance and crime are daily administering them in mortal doses, and an intricate branch of medical jurisprudence, Toxicology, is chiefly occupied with the discovery of means to detect their presence before or after death, and to counteract their virulence during life. In medical inquests on the dead body, where the life of an innocent accused is often at stake, the nicest acquaintance with morbid anatomy is often required, to distinguish the natural effects of disease or incipient decay from the consequences of recent injuries, or the morbid changes produced by poisons; and the detection of the various poisons under such circumstances, often demands the profoundest knowledge of chemical analysis. Indeed, from the importance and the variety of the subjects which come under the cognizance of the medical jurist, he requires not only the greatest professional knowledge and experience, but great presence of mind, candour, and a judgment clear, ready, and unbiassed.

Such are the departments taught by the medical faculty of this establishment, and to facilitate their acquisition, as well as to diminish the expense to the student, he has constant access to a Medical Library, containing many valuable works and plates, and to a Museum of Anatomy already equal to that of any medical school of the metropolis. A separate Museum is formed for the departments of Comparative Anatomy and Zoology, in which these subjects are taught. In common with all other medical schools of London, we are still destitute of a Botanic Garden; but the connexion of our learned Professor of Botany with the Horticultural Society, fortunately enables him to prevent that deficiency from being felt. For the illustration of Morbid Anatomy, the University possesses an immense collection of coloured drawings, executed by the Professor of that department himself, from actual diseases, and the most interesting parts which they represent are preserved in spirit in the Museum: this department, which is also illustrated by the dissection of recent morbid parts, must be greatly increased in interest and value by the approaching opening of the Hospital. Many of the Professors give private practical instructions in their respective departments, which in such complicated studies as Chemistry and Pharmacy must be invaluable to those who can avail themselves of these advantages. The whole of the rich materials for the illustration of Materia Medica and Pharmacy, are the private property of the Professor of that branch, and exhibit the splendid result of an active life espe-

cially devoted to the cultivation of this department. For the Obstetrical department, the University has been so fortunate as to purchase the whole of the beautiful preparations and machinery of the late museum of Professor Davis. The spacious apartments for Practical Anatomy are conveniently placed apart from the general building, by which the students can devote themselves to that study without the inconvenience or the risk of interruption. And every department of the curriculum is provided with whatever specimens, apparatus, instruments, drawings, diagrams, and other means of illustration, the experience of the past years has shewn to be useful in communicating knowledge. Until the Hospital is completely ready for the admission of pupils, the usual duties will be performed at the University Dispensary. The Medical Society of the University, composed of students, is calculated to forward the great objects of the School, by promoting a generous emulation in study, and an agreeable interchange of knowledge—by reproving the wayward and encouraging the good dispositions of its youthful members — by tying early bonds of friendship, which will be the means hereafter of extending their professional acquaintance — and by promoting that unanimity of sentiment and kindly feeling for the prosperity of the institution, which has ever characterized our medical students. The more diligent students have also opportunities at the Monthly Evening Conversations, held in the Museum, of conversing with their more advanced professional brethren and with the friends of the institution, who favour us with their company on these occasions.

With these means of instruction, and by the conscientious discharge of our several duties as teachers, our medical school and the general establishment, without privileges or endowments of any kind, have continued to prosper and to gain in public estimation, and in conjunction with King's College, almost to afford the advantages of a University to this great metropolis. Indeed, the best privilege which a University can possess is the means of teaching the greatest number of polite sciences in the most efficient manner; and without the secure possession of these means, all adventitious privileges and dignities are absurd vanities, calculated only to benefit a few individuals, who may be protected by such privileges—to excite petty jealousies among professors by establishing inequalities of rank—to rouse the odium of the profession by a monopoly of privilege and an assumed superiority—and to deceive the public with a false show of stability. Here all is harmony—all are animated with equal zeal; here a liberal Council is ever watchful to curb the ambitious and protect the oppressed—an advantage wanting in other private schools. Here no invidious distinctions have yet sown the seeds of dissension, or damped the ardour of the teacher; the enthusiasm of each in his own field of inquiry excites a kindred ardour in the youthful student; and the business of education is still an unmingled source of satisfaction and delight. Our institution is based on the most rational and solid foundation which an unendowed University could justly desire; not on monopoly or exclusive rights, which generally protect only such commonplace or lucrative subjects as never require protection, and leave the higher departments to perish, which alone constitute the difference between a University and a private School, but on the liberality of its principles—on the congenial sentiments of an enlightened public—and on its efficiency as a school for the sciences it professes to teach. The busy hand of reform, every where aiding reason against custom and power in establishing the rights of man, is no where more wanted than in the medical institutions of our country, to adapt them to the present improved state of the profession, and to the present wants and condition of society. The exclusive and obnoxious power gradually usurped by the College of Physicians of London, is contrary to reason, justice, expediency, and public good. The system of apprenticeships to apothecaries and surgeons is a system of menial occupation, idleness, or vice: it is a remnant of the low and ignorant state of the profession in olden times: it serves only to secure pecuniary advantages and gratuitous service to a few interested men, but is ruinous to the education and character of our youths, degrading to the medical profession, and injurious to the community at large. By shortening the period of our medical curriculum in this University, in consequence of the duration of apprenticeships, we sink the value of our diploma as a testimonial of knowledge, by one year's study, beneath that of Edinburgh; we countenance an abuse which we ought to endeavour to remedy; and in place of extending medical education by our new institution, we curtail its advantages beneath the existing standard, as if cheaper honours were to be more coveted.

From the abuses which encumber institutions of ancient date—from the discordant interests which divide the profession —and from the injurious influence of chartered monopolies—the task of medical reform, now in progress, will be as difficult as it is important; but no period for the

attempt could be more appropriate than the present age of reason. Establishing and defining the grades of our profession—organizing and reforming colleges—limiting the chartered rights of corporations—planning curricula of education and appointing disinterested boards of examiners for the different degrees of the profession—defining the privileges of universities and of private medical schools—establishing new subdivisions of medical science—defining the qualifications of teachers—the regulating of medical patronage—are subjects which require much deliberation and inquiry, and in which the safety of the community and the character of the medical profession, are alike interested.

The ancient divisions of medical science, as commonly taught in the schools of England, are altogether inadequate to their present advanced state, and are incompatible with their being now efficiently taught; and this affects not only the existing schools and universities, but the regulations of all chartered companies, and the whole system of medical education. The inefficient manner in which the subjects of medical education are taught in our schools by the present system, is partly indicated by the remarkably absurd regulations of chartered companies requiring students, during the short period allotted to their academic studies, to attend several times the same course of lectures; as if several superficial courses on subjects of vast extent and importance, were equivalent to a full and detailed course, given by a judicious subdivision of the subjects among distinct teachers: and these regulations emanate from those very bodies whose province it is to watch over medical education, and to take care that no course shall comprehend more than can be efficiently taught within the period prescribed for its duration. It is only in established universities that a full and comprehensive plan of education can be maintained or expected; for they alone, in all countries, are endowed with means to ensure permanent protection and talent for the higher and less popular or common departments of knowledge, and to secure that subdivision of labour which the extent of the sciences demands. These advantages can never be established in a private school, where a single teacher is compelled to undertake several departments in order to afford him adequate remuneration.

The privileges of chartered corporations may prove ruinous to the best interests of our profession, and injurious to the state, if not liberalized and watched by a just and impartial government: but if the corporation of apothecaries and the corporation of surgeons are the best fitted to plan their own curriculum, and to judge of the qualifications of their own candidates for these grades of the profession, why is the corporation of physicians alone, in this respect, a name without a reality? As it is the obvious interest of every teacher to circumscribe the curriculum as much as possible within the limits of his own department, it is as injudicious to leave to them the planning of that curriculum, as it is to make them also the sole judges of the qualifications of their own pupils for the highest honours in medicine. If training the youthful mind to paths of usefulness, honour, virtue, and happiness, be the grand object of universities, it tends only to corruption to make them a mart for the traffic of distinctions, and a scene of mercenary contentions, however expedient it may be for the state to enrich them with the profits arising from the sale of honours. There can be no good reason, however, for London being behind Oxford and Cambridge in these advantages. The foundation of a liberal metropolitan university, like that of the sister kingdom, would be an undertaking of vast extent, and worthy of the present liberal and enlightened age; but walls and apparatus do not constitute an university, for they can neither teach the sciences nor ensure their being taught. Indeed it is too obvious to require remark, that these are the last, and not the first, requisites of a university which is founded on pillars, not of stone or of mortar, but of genius and learning. The University of Edinburgh, so long the Athenæum of Europe, when in its glory—in the time of the Blacks, the Cullens, the Monros, the Gregories, the Stewarts, the Playfairs, the Leslies—consisted, as some here may remember, chiefly of an unseemly aggregate of ancient cottages, where the light of genius shone brightest in obscurity and unadorned; and in proportion as its palace has risen, that university has sunk. Let us learn from experience, and let us hope that the period is not far distant when England will no longer stand alone among the nations of Europe, with its capital destitute of such a seminary, to extend the blessings of useful knowledge and polite learning to its vast population; and when that period shall arrive, the founders of this noble institution will see the object of their disinterested ambition realized, and will have the glory of having given the first impulse to an undertaking the most beneficial to their country and to mankind.

ANALYSES AND NOTICES OF BOOKS.

'L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Dictionary of Practical Medicine, &c. By JAMES COPLAND, M.D. &c. Part II.

WE at length find a second part of this extraordinary work upon our table, and do so with all the satisfaction that attends the recovery of a lost treasure. We had misgivings, owing to the long delay; but these are now happily removed. The second part of the "Dictionary" is equal to the first; and it would be difficult to bestow upon it any higher commendation. The present portion extends from Climacteric decay to Dropsy, inclusive; and contains highly interesting and elaborate, but condensed, essays on Climate, Cold, Colic, Coma, Concretions, Constipation, Convulsions, Croup, Cough, Debility, Delirium, Dentition, Diabetes, Digestive canal, Disease, Dropsy; with many short articles which intervene. We have not, indeed, perused all of these, but we have done enough to enable us to form a judgment, and to convince us that it is at once the most complete, convenient, and satisfactory work of the kind which has ever fallen under our notice.

A Compendious History of Small-pox; with an Account of a Mode of Local Treatment which prevents the Seaming or Scarring of the Skin, and the occurrence of that aggravation of symptoms in the advanced stages of the disease, hitherto denominated Secondary Fever. By HENRY GEORGE, Surgeon; Surgeon Extraordinary to His Royal Highness the Duke of Gloucester.

To the readers of this journal, the views of Mr. George regarding the propriety of local treatment in confluent small-pox, are familiar. In several papers communicated to the Gazette, and now reprinted in the volume before us, he has described the good effects which follow the application of calamine as a local remedy. This method, he conceives, not only prevents the process of ulceration, but always rescues the sufferer from much misery, and very frequently from a state of the greatest peril. We shall be most happy to find that practitioners give it a fair trial, and that we be made instrumental in conveying the results to the profession. Mr. George, we perceive, ingenuously points out a passage in an old author of the tenth century, which clearly saves him from the charge of starting any very heretical or daringly novel doctrine. Ahron, the author in question, directs that "when the pustules are suppurated, the patient is to lie upon flour of rice, and be fumigated with myrtle and olive leaves, which will *dry* them." Mr. George bars the myrtle and olive leaves, and contents himself with simple calamine. The historical part of the volume is very well written; and, altogether, we can recommend the performance as highly creditable to the author, and we have no doubt it will be found as useful as it is interesting.

Outlines of Botany. By G. T. BURNETT, Professor of Botany in King's College, and Fellow of several Societies. Churchill, Princes-street.

MR. BURNETT is evidently a first-rate botanist—ardently devoted to his subject—loving the science as a mistress. The mass of information collected into his Outlines is very great, and constitutes a sketch of the whole vegetable kingdom—not a mere introduction, in the ordinary acceptation of the term. The subjects are illustrated by numerous and well-executed woodcuts; and the whole, so far as the fasciculi have yet gone, are well got up. We must, however, remark (to shew that we are not insensible to faults as well as excellencies), that Mr. Burnett's style is by no means happy; it is at once quaint and involved, and certainly does not show to advantage the extent of information which an attentive perusal convinces us the learned Professor possesses on his favourite subject.

Illustrations of the Surgical Anatomy of Inguinal and Femoral Hernia. By WILLIAM BLOXAM, M.R.C.S. With Mechanical Plates.

THE method of illustrating various subjects in anatomy by means of plans with moveable parts, has lately been a good deal employed, and some ingenious applications of the principle have been made to surgery and midwifery. Among these, the Illustrations of Mr. Bloxam deserve attention: they will be found to afford the student great assistance in mastering several important and rather difficult points in surgical anatomy.

MEDICAL GAZETTE.

Saturday, October 5, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

OPENING OF THE MEDICAL SESSION.

THE wheels of the great educational machinery of the metropolis—a twenty or thirty-school power, we believe—are once more set in motion. In this, the working at least of a metropolitan University may be discerned, however it may be destitute of the combining and governing influence that should regulate the whole; and from this, also, we may see the absurdity of any one school—a fractional part—setting itself up as a whole, and assuming, *par excellence*, the title that should be given only to the aggregate.

At the commencement of the session we used sometimes, in the earlier part of our career, to volunteer a certain quantum of that thankless thing called advice, both to student and teacher—particularly the former. We have grown wiser as we have grown older, and now generally reserve our maxims of morality and rules of conduct for the very few occasions on which they are imperatively required. In the way of practical usefulness and the conveying of sound professional instruction, we fancy we can be much better employed; and in that way we have long proved ourselves strenuous labourers. This week, however, it will be seen that we are not wholly regardless of the *nonce*; for we publish no less than two Introductory Lectures, delivered in two of our metropolitan schools,—not that in doing so we have the most remote intention of allowing the schools so singled out any superiority or concession of pre-eminence over their contemporaries, but because we have found these addresses very well suited to the occasion; being, as they pretend to be, introductory or opening lectures, treating chiefly of the business in the several departments of medical science with which students will be occupied during the session on which they have entered. The topics discussed in both are of a very general nature, and, though trite, are ably handled: and there is a manly straightforwardness of purpose displayed in both, for which we can hardly give them too much praise.

By the way, it is rather a failing of ours that we do not often assume even the merit that is our due: but there are occasions when it is certainly a fault not to claim it. This time last year there was a vicious fashion prevalent, to which we thought a little castigation would do no harm. Ridicule was the instrument we determined to use, and, we are happy to see, with such effect as gives us no small reason to be satisfied. It was the fashion to trumpet forth in introductory lectures at the beginning of the session in certain schools, the praises of self and company, and pompously to state the most overweening claims to exclusive excellence. Much of this, we have the satisfaction to find, is already completely altered. In the Gower-street school, for example, it has been generally remarked how much the tone has been subdued from that of the silly fanfaronade which was blown last year by the lecturer on medicine, and by the teacher of midwifery the year before. But on the commencement of the present session there has been no wanton attack on the other medical schools—no ridiculous display of gratuitous generosity, on behalf of self and comrades surrendering the reversion of fees which were *in nubibus*: in short, there has been no vile puffing this time. Dr. Grant, we are pleased to

find, on referring to his lecture, has not followed the example of his predecessors. Some tendency to exaggeration may certainly be noticed here and there; but the atmosphere of the place is evidently favourable to boasting; and in some parts, we could almost affirm that a censor's hand had been at work—judging, at least, from the length to which the lecturer sometimes ventured, and where he was but too evidently crippled. Here and there, as we have said, a dash of the old vice—the besetting sin of grandiloquence—is perceptible; but, on the whole, we give Dr. Grant the fullest credit for having adopted a much more moderate tone than his predecessors, which indeed we should have *à priori* expected from a man of his known steadiness and ability*.

Dr. Watson's address is a model of business-like, unpretending statement, evidently the product of an accomplished physician, and the most remote from any thing in the shape of puffing that can well be desired. The King's College medical school stands acquitted of putting forth any gasconading pretensions; and to do its managers justice, they certainly deal much less in the article of self-commendation and vaunting assurance than their Gower street competitors. But even while we say this, we regret that we feel it our duty to give the King's College folk warning, that we have observed of late some strong symptoms of an undue desire to cry up their establishment in a certain quarter: though so far as the attempt has yet been made, it has been too impotent to be very offensive, or any thing more than amusing. For our parts, we have already, we think, fully shewn how inveterately we are opposed to all quackery and puffing, from whatever quarter it emanates; and we now beg it may be clearly understood, that as we have shewn no favour or affection to the Gower-street school, since it became degraded by having recourse to self-trumpetings and the publication of the vainest pretensions, so shall we convince the gentlemen of the school in the Strand, that if they have any regard for the good opinion of the discreet and sober members of the community (of course including ourselves in the number), their best policy is to silence the wight who is doing them mischief, and in good earnest to abjure the discredit of his patronage.

* A contemporary, who has an unequalled talent for blundering, says, in his number of this day—"We are highly gratified to perceive, by the introductory lecture of Professor Grant, at the London University, that the Government is determined to grant the University the power of conferring degrees in medicine." Now the truth is, that Dr. Grant did not make any such statement; and that if he had, it would have been contrary to the fact.

OUR ARRANGEMENTS FOR THE ENSUING SEASON.

We have now presented our readers with extended courses of lectures on Medicine and Surgery: we purpose during the ensuing season to add one on Midwifery, and the Diseases of Women and Children. We have also made extensive arrangements for providing an ample supply of clinical lectures and other interesting materials. And we will only add, briefly—for we have no pretensions to the boasting accomplishments of our contemporaries—that if we might hope our readers were but half as well content with the result of our labours as we are with their yearly increasing patronage, then would the fulness of our satisfaction be doubled in the assurance that it was mutual.

MR. STANLEY AND MR. SKEY.

The excitement caused by the disturbances which took place some years ago in the Gower-Street School, between the lecturer on anatomy and his demonstrator, together with the subsequent rows in the theatre there, having afforded a good deal of *copy* to one of our contemporaries, and sold a few extra num-

bers of his journal, the same worthy has lent his best assistance to get up a repetition of the same scenes at St. Bartholomew's. With the private arrangements of Mr. Stanley and Mr. Skey we have nothing to do; but as the lecture-room is not the fittest place in the world for deciding such points, and as joining in uproarious proceedings is not exactly the purpose for which young men are usually sent by their friends to London, we were very glad to learn that the attempt to create a riot had totally failed, notwithstanding the tocsin being sounded by our amiable contemporary.

The very small proportion of the audience who joined in the disturbance had their efforts speedily crushed by the overwhelming majority of those friendly to order and propriety; and when, after the lecture was concluded, an attempt was made to renew the *diversion* in Mr. Skey's favour, it met with the same fate, Mr. Stanley having come forward and made the statement which will be found in a subsequent page.

What claims Mr. Skey has to more remuneration than Mr. Lawrence or Mr. Stanley had, when they filled the same situation, or than he bargained for when he accepted it, we know not; but he certainly has not taken the right method to obtain the sympathy of the respectable part of the profession. It will be remembered that we last week received a letter from this gentleman, upon the subject of his exclusion from the office of demonstrator of anatomy at St. Bartholomew's Hospital: it was written in a strange tone, although it contained no expression particularly offensive, and we therefore published it, because we would not willingly deny the means of making his grievances known, to any one who stated them in a temperate—if not a conciliatory manner. On the same day, however, in which we gave insertion to the letter in question, another appeared, through a different medium, upon the same subject, and from the same writer. Nothing can be more remarkable than the difference between the two letters: the one addressed to us displays only a few rough expressions and much bad taste; the other, which was to reach the world through the purer pages of our contemporary, is filled with vaunting of himself, and depreciation of others — with inuendo-imputations of bad motives to every individual holding any office of responsibility at St. Bartholomew's, whether governors, medical officers, or his own immediate colleagues in the business of teaching. We heartily thank Mr. Skey for the discrimination he has thus shown in the assortment of matter for us and for our contemporary; he is quite right—much is suited to his pages which is not fit for ours. If Mr. Skey wished to prevent an explanation, and to place Mr. Stanley in a position which would render his offering one an unbecoming condescension, he has fully attained his purpose. His appeal to us, therefore, "to support him in obtaining an inquiry," is made in vain; we cannot further the end unless we approve the means. This, however, need be no subject of regret, for it will serve to secure him a still warmer sympathy in those fostering arms which are ever open to receive and console neglected merit. *Let him take heed that he is not consumed in the embrace.*

MR. STANLEY'S ADDRESS.

The theatre was much crowded to hear Mr. Stanley's introductory lecture. Some disturbance was evidently expected, and the opening of the school in Aldersgate-Street having been postponed, all the pupils in the neighbourhood had an opportunity of being present. Some partial hissing took place on Mr. Stanley making his appearance, but it was soon drowned by the preponderating applause, and the lecture proceeded without interruption to its close. Another effort at

expressing disapprobation being again made, Mr. Stanley came forward and made the following statement, which appeared to be regarded as perfectly satisfactory by nine-tenths of those present.

"I request your attention to the few observations I am about to make respecting the arrangements in the Anatomical department, concerning which you are, I presume, now interesting yourselves.

"There are certain regulations emanating from the Governors of the Hospital, for the management of the school established by them within its walls.

"According to these regulations, certain parts of the Anatomical department are to be arranged by the Anatomical teacher, with the concurrence of the medical body of the hospital, composed of the Physicians and Surgeons.

"And I have now to state that no arrangements have been made in any other way than that here pointed out by the Governors, namely, with the concurrence of the Physicians and Surgeons.

"I hold myself responsible for the communication of the most complete instruction in the departments of science with which I am especially concerned.

"If, however, there are any gentlemen not disposed to trust to this pledge, and who will still feel themselves aggrieved, who will think that the instruction now proffered to them is not so good as that which they have hitherto received, I shall be most ready to give to such gentlemen every facility in making those arrangements for themselves which they may conceive will be most conducive to their advantage.

"I assume that disapprobation can be expressed only by those gentlemen who, having entered to the lectures, may feel that the instruction now proffered is not so good as that they have hitherto received. And, accordingly, to such gentlemen I declare my perfect readiness to return to them the portion of their fees they may wish to receive.

"And as an assurance to the class of my having performed this promise, I shall be ready to publish upon the walls of this theatre or elsewhere, the names of those gentlemen by whom such applications have been made to me."

GENERAL DISPENSARY, ALDERSGATE-STREET.

It is whispered that some juggling is on foot between the Committee of the Aldersgate-street Dispensary and the medical men who are now doing duty there. The rumor is, that they are to be elected without becoming candidates. We cannot credit it: no body of men can be so blind to the distinction between right and wrong as to imagine that they can without disgrace accept an appointment which they acknowledge it would be unprofessional, and little short of infamous, openly to seek. If they do accept appointments thus thrust upon them, then is their present reserve but affectation—a fear of public censure, not a love of professional honour; then is their declining to ask for what they secretly covet, the result of cowardice,—with just sagacity enough to know what is wrong, but without virtue enough to do what is right. It would in short be such a contemptible piece of dirty shuffling, that we will not believe it, notwithstanding the source of our information, and feel convinced that the gentlemen alluded to will be the first to rebut the charge*.

WAKLEY OUTWITTED.

Some satirical rogue has written to the Editor of the *Lancet*, complimenting him upon his "powerful" leaders in support of the medical officers of the Aldersgate-street Dispensary, which, he says, have made him quite the "*Times*" of the profession; and not content with the puff direct, he farther indulges our contemporary with the puff collateral, contrasting his spirit and consistency with the "cautious special pleading" of the Gazette on the same subject. It is astonishing that Wakley should have

* Since writing the above, the mask has been thrown off. Two of the surgeons on duty have openly announced themselves as candidates.

been such a blockhead as to be taken in by this, and not perceive that

"Praise undeserved is satire in disguise"—

the thing being evidently written in irony, though he has actually published it in pure simplicity, and has thus compelled us, in self-defence, to expose his total want of any thing like consistency on the subject — his veering with the changes of the wind — the most mobile and obedient weathercock in the metropolis. But it will be asked, does he *not* support the medical men on this occasion? Oh, yes; nothing can exceed the virtuous indignation which he now displays against the insult offered to their medical officers by the Dispensary Committee, *except* the insult which he himself offered them when the discussion first began; nothing can be more unqualified than the support he now gives the medical officers against the Committee, *except* the support he then gave the Committee against the medical officers; nothing can equal the abuse he now vents against those who may become candidates for any of the vacancies, *except* the abuse he then poured forth against the men who lately held the appointments.

When the law was first proposed by the Committee, that persons subscribing only three days before an election at the General Dispensary in Aldersgate-Street should be allowed to vote, the medical men addressed a circular to the Governors, calling upon them to come forward and reject it. We seconded their appeal, and have never held but one straightforward, uncompromising, and consistent course throughout. The Editor of the *Lancet* has also recorded his opinions: *he advised the Governors to disregard the appeal of their officers*—whom he represented as having obtained their own appointments by "lying and intrigue." He gives a supposititious case of "a thorough-going intriguer," and then ironically adds, "such a man is well entitled to call upon the Governors to adopt a more pure system of election."!

Now all this is nothing to us, and being but part and parcel of the character of the publication, we should never have dreamt of alluding to it but for the inconceivable folly of our contemporary, in inserting a sneer against the Gazette, and thus challenging a comparison with us on this subject. He shall be gratified. For the strength and consistency of our humble support to the cause of the profession on this occasion, we appeal to every sentence in this journal in which the subject has been alluded to;—in proof of the nature of Wakley's support, we shall also adopt an analogous proceeding: we shall give him the benefit of his own words—shall adduce not a syllable against him, except from his own pages.

Wakley's Appeal to the Governors of the Aldersgate-Street Dispensary against the Medical Men, and against preventing the appointments from being sold.

"The officers of the General Dispensary in Aldersgate-street have forwarded to us a copy of a circular which they have addressed to the Governors of that institution. [Here follows an extract showing that the medical men called upon the Governors to oppose the abrogation of the law, that no one should vote who had not subscribed six months before, and proposed substitution for it of one empowering any person to vote who paid his money three days before the day of

Wakley's Appeal to the Medical Men against the Governors of the Aldersgate-Street Dispensary, and against allowing the appointments to be sold.

"At this meeting—[*i. e.* one at which the question as to the mode of election was decided against the medical men,]—the whole of the medical officers, physicians and surgeons, resigned their offices. Why? Because the Governors, in the opinion of these medical officers, shewed a wanton disregard of the respectability of the profession and the welfare of the sick poor. Is there a legally qualified member of any one of our Colleges or Halls who will so debase himself—who will so insult all his

election; the *Lancet* then continues:—] So much zeal and apparent liberality in a good cause is entitled to our admiration. But in casting our eye over the six names which are subscribed to the circular, one is led to inquire how, in the name of all that is wonderful, a majority of those self-same gentlemen happened to be elected physicians and surgeons to an important institution. Was fame the cause of their success? No.—Their discoveries in medicine? No.—Great skill exhibited in the performance of medical duties? No. * * * * *The subscribers of the charity need not interfere, for we assure them it would fatigue their brains to devise any method which could deteriorate the one they already have. The proposition for preferring the vote of a fellmonger, or fishmonger, of six months' existence, to one of three days, in the selection of a medical officer to a charity, is assuredly bottomed in absurdity.* For ourselves, we know not how to choose between the man who would obtain an office *through the direct influence of money, and he (him) who, to insure success, would not scruple to resort to lying and intrigue."—Leading article,* LANCET, *July* 6, 1833.

professional brethren — who will be so ready to proclaim his own infamy, as to accept an office in a medical institution, the Governors of which have already declared that such office is open to sale, and may be had by the highest bidder? Good God!—how repeatedly have we declared that these Dispensaries may be denominated human slaughter-houses? *and here, in confirmation of our statement, it is announced that multiplied contributions, of only a few days' standing, may secure the legal impunity of destroying the wretched beings who seek for a mitigation of their sufferings under the much-abused name of charity.* ——— But we implore — most earnestly implore — every member of the profession, who places the slightest value on the respectability and usefulness of that profession, or who is desirous of preserving his own peace of mind, [&c. &c.] to approve, by his voice and actions, the noble resolution of those medical officers who have abandoned an important station *rather than witness the sacrifice of a principle in which the maintenance of their own honour, and the welfare of the sick poor, are alike involved."—Leading article,* LANCET, *Sept.* 14, 1833.

So much for the "*Times*" of the medical profession.

CONDUCT OF SOME MEDICAL WITNESSES AT CORONERS' INQUESTS.

Two or three things have happened this week connected with Coroners' Inquests which we think deserve a word or two of notice. In the first place, there was a medical man who declined to say what was the cause of death in a very simple case, unless he was first permitted to hold a post-mortem examination. The jury found a verdict of "accidental death," without consulting him further. We think the jury was right, both in point of fact and of conduct; and that the medical man was needlessly fastidious about giving his opinion. It is a very mistaken notion that is entertained by some medical witnesses, that a post-mortem examination is essential in every case before an opinion regarding the cause of death can be given. Why, even in cases of poisoning, the internal lesions are often immaterial, and the whole *corpus delicti* is manifest either from the symptoms preceding dissolution, the external marks, or the moral circumstances: an inspection of the morbid appearances may often be very well dispensed with. Besides, where in a trivial case sufficiently intelligible to a jury of common understandings, a medical man steps in, and calls for a post-mortem examination, he has the air of wishing to mystify a plain matter of fact, and gets the character of being only bent upon having his fee. With regard to the fee, it were very desirable that some legal arrangement were made; for the Coroner *has not* the power, in the present state of things, of allocating one: the demand, therefore, at present, on the part of the medical witness is fruitless; and to avoid any squabble about it, the Coroner and jury very often prefer going without a medical opinion at all.

Another case has occurred, in addition to the one noticed last week, in which a medical man refused to answer a question of the simplest nature without a fee. Perseverance in this practice, though it may be ultimately attended with benefit to practitioners, has, we are sorry to say, a very poor appearance in the eyes of common observers.

A third point which we would remark

upon is what occurred very recently, in an inquest on a child. This child was strongly suspected to have come by its death in consequence of violent treatment received from the brutal father: the symptoms of the child's death and the moral evidence almost proved the fact; yet there being no morbid appearance or marks of lesion discoverable on the medical inspection of the body, the inference was, that the violence inflicted was not the cause of death: nay, one of the witnesses ventured to say, that if the injury just referred to had been the cause of death, marks of it would have been apparent. With submission to this learned jurist, we can only say that we are astonished at the hardihood of his assertion. It is a great mistake to think that death cannot occur from blows or kicks without the marks of these injuries being discoverable on the body. Every tyro in legal medicine knows to the contrary, and can point out decisive cases on the point. Loose opinions of this kind thrown out by men, called medical, who happen to be summoned before Coroners' juries, do much mischief, from the handle which they afford to contradiction, and thus to lowering the value of medical testimony in the estimation of the public.

CLINICAL OBSERVATIONS

ON THE

AMPUTATION AND REMOVAL OF PORTIONS OF THE LOWER JAW.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.*

A frightful cancer has devoured a lip—it has seized upon the jaw—the bone is deeply disorganized, or destroyed—the evil makes rapid progress, which the resources of art cannot arrest—the patient is doomed to certain death. Before he reaches the fatal goal, however, he is the victim of the most cruel tortures that can afflict humanity. His hideous aspect renders him an object of disgust and horror both to himself and his acquaintances; they fly from him: sequestered from society, he courts death, and complains of the slowness of its approach. On beholding such an object, the heart even of the professional man shudders: he seeks, in the resources of his ingenuity, for some means which science denies; a bold operation is attempted; the whole evil is removed; the most brilliant success crowns the hopes of the operator; the wretch whom death had just now menaced is delivered from all suffering; in a short time all the horrible traces of his disorder have vanished; and he re-enters society, to enjoy all his privileges and advantages, and he may live a long life after. . . . . How shall we hail the man to whom humanity is indebted for so great a benefit? . . . But let us hasten to proclaim it aloud—to the glory of its author—to the glory of French surgery—that it was in France, in Paris, and by our own illustrious surgeon, M. Dupuytren, that this admirable operation was first conceived and executed. It was in the year 1812. It now belongs to the general domain of science; and numerous examples of success, obtained by many surgeons in various countries, have completely confirmed its efficacy.

Before we enter on the development of which the subject is susceptible, we think it our duty to record the first case in which amputation of the lower jaw was ever performed.

The earliest Case of Amputation of the Lower Jaw—Complete Success.

Lesier, a cabriolet proprietor, aged 40 at the time when he was operated upon, had experienced, in the year 1797—that is to say, fifteen years previously—certain dull pains in the lower jaw. The left canine tooth soon after became prominent, and fell out, being presently replaced by a fungous excrescence which sprung from the bottom of the socket. This tumor, though frequently attacked with the actual cautery, as often sprung up again, more large and painful than ever: it degenerated at last into carcinoma; and when the patient at length, in 1812, after much hesitation, came to put himself under M. Dupuytren's care, and agreed to permit an operation, his state was as follows:—The cancerous tumor extended from the second molar on the right side to the ramus of the maxilla on the left. The base of the tongue was turned backwards; the teeth were embedded in the fungus, whence there flowed a disgusting and fœtid sanies. The lower jaw was of triple its natural size, and the sarcoma was buried deeply in its substance. The tumor was reddish, mixed with white, and it obliterated and protruded beyond the opening of the mouth, which it kept extended as

* In the present "Leçon," it will be seen that the reporters take upon themselves the whole responsibility of sounding the praises of the surgeon of the Hotel Dieu, sometimes in the highest strain of panegyric.—*Transl.*

wide as the articulation of the jaw would permit. It formed three projections; one of which rose between the dental arcades, whilst the other two pushed forward each a cheek. The only means of putting food into the mouth was by drawing aside the right commissure. Respiration difficult; ptyalism abundant; mastication almost wholly impossible; the utterance extremely indistinct. Yet the appetite was still active, and the constitution of the patient seemed so little impaired that no fear was entertained of the slow fever under which he was continually labouring.

Having given him a purgative on the 28th November, M. Dupuytren, assisted by Messrs. Breschet, Lebreton, and some other surgeons, proceeded two days after to the operation. It should be noted here, that the patient had the imprudence to drink, in the morning, a litre and a half of wine, to give him strength. He was placed sitting as for the operation for cataract. The labial arteries were compressed against the rami of the maxilla. The surgeon, placed before the patient, seized with his left hand the right side of the lower lip, whilst an assistant attended to the left side. An incision was then made through the middle of the lip, and extended nearly to the hyoid. The two flaps thus formed were dissected off, leaving the tumor uncovered. A section was then made of the jaw on each side, about an inch from its angles: the instrument used was a hand-saw.

There was no blood of any consequence lost in proceeding so far; but as soon as the muscles attached to the apophysis and the mylohyoid were divided, the arteries, which were more voluminous in relation to the tumor, became engaged. The hæmorrhage, however, was less than could have been expected. The fingers of the assistants, or of the surgeon, applied to the branches of the submental and lingual arteries, suspended the effusion of blood, and the carcinoma was in short wholly removed. The trunk of the submental was tied, and the wound was cauterized with an iron at a white heat. Charpie was put before each stump, and the flaps were drawn together. In order to encourage a flow of pus, a wick was placed in the lower part of the wound, near the hyoid; and, finally, the external parts were covered with charpie and compresses, and the apparel supported by a chin cloth. But no sooner was this done than a hæmorrhage took place, and the patient had to be undressed again. A cauterization more severe than the first was effected; and after being dressed once more, the patient was able to put himself to bed. The parts removed weighed a pound and a half; the bone was exostosed, carious, necrosed, and softened, in several places; the fungus was hard, fibrous, and crepitous under the knife.

Every thing went on favourably after the operation. Upon removing the apparel on the 5th day, the part of the flaps which were brought together were found perfectly reunited. The eschars became detached on the 15th day; the appetite of the patient was good; and there was no disturbance in the system. On the 27th day Lesier drove one of his own cabriolets; on the 30th two little pieces of bone came away from the stump; and in fifteen days more the cure was complete. The tissues gradually hardened; the two stumps approached each other; and a sort of chin, which was newly formed, almost wholly removed any deformity. It is now twenty-one years since the operation, and M. Lesier is at this moment in the enjoyment of the best health. His picture, representing him such as he was previous to the operation, may be seen in the museum of the School of Medicine.

Having thus related the circumstances which gave occasion to M. Dupuytren to practise this important operation, it will now be proper to state how he was induced to contrive it; what are the circumstances which indicate its adoption; in what consists the essence of the operation, and the varieties which it presents, according to the part of the jaw that is concerned; and what are the consecutive accidents likely to be developed. We shall then give a very succinct account of the numerous operations of the kind since practised, both in France and in other countries.

It was proved long ago by the effects of wounds from fire-arms, attended by comminutive fractures, that considerable portions, or even the whole, of the lower jaw might be destroyed, without death resulting from those mutilations. M. Larrey speaks of a soldier who lost nearly the entire of it, and who yet lives; and since the year 1815, a number of soldiers with similar lesions may have been observed at the Hôtel des Invalides; some of them are even still to be seen. Other causes also, such as caries or necrosis of the bone have often destroyed more or less of it, and yet the patients have recovered without any great deformity being left. Hippocrates himself relates such a case. But one of the most remarkable on record is that which Guernery observed at the Bicêtre: the whole of the lower jaw exfoliated, and then grew again, so as even to allow of mastication. Van Wy speaks of a patient who lost the jaw almost wholly, yet survived for a long time. Two similar cases are to be found in Desault's journal. A woman at Bourges lost the right half. M. Boyer relates, in Plenk's Bibliotheca,

that a man had his jaw taken off by a millstone, yet was saved. But notwithstanding all the cases on record serving to demonstrate the facility with which losses of substance of this part are borne wi hout the occurrence of formidable consequences, the matter remained without application until 1812, when M. Dupuytren conceived the possibility of amputating the lower jaw—an operation which deserves to be accounted as a conquest in surgery. Since this date, however, as we shall see, it has been frequently repeated by several of the most clever surgeons in France, Germany, England, and America.

The affections which principally call for the aid of this operation are fungus hæmatodes, spina ventosa, and cancer, which extend from the soft parts to the osseous, and osteo-sarcoma, which develops itself primitively in the latter. This last disorder is decidedly the one which has most frequently demanded the performance of the operation; and we therefore think it not out of place to offer some details on its development and symptoms in the maxillary region. The disease sometimes arises from the extension of a cancerous complaint from the lip to the gum, and from the latter to the bone. At other times it is the result of a cancerous degeneration, of an epulis, which has equally invaded the tissue of the bone. In both these cases, the disease of the bone, which is but the consequence of that of the neighbouring tissues, is always in a less advanced state than in those tissues. But where the osteo-sarcoma is the primitive disorder, it remains for a long time limited to the bone, and may acquire a considerable volume before the tissues of the lip and cheeks are affected. Hence we have the complaint presenting itself in two principal forms: in the one, consisting of cancerous fungosities, red and bleeding, rising above the substance of the bone, the latter substance remaining only very superficially, if at all, affected. The second form is that in which the disease begins at the centre of the bone, which *carnifies*, and becomes swollen in its thickness. Most tumors of this latter sort acquire a considerable bulk, and produce a repulsive deformity: the teeth, loosened and displaced, seem implanted here and there in the substance of the bone; to close the jaws is impossible: the lips distended, thinned, and tightly applied to the tumor, do not retain the saliva which comes over them continually: yet it is to be observed that tumors of this kind do not for the most part ulcerate or become cancerous for a long time. This is why we have reason to think that certain complaints have been frequently treated as osteo-sarcoma which have been in reality only varieties of spina ventosa; and we are the more strongly inclined to adopt this opinion, since in touching the circumference of the tumor we may often feel under the mucous membrane an osseous plate of extreme tenuity, which gives a sound like that of crackling parchment when it is pressed upon. But it should be added, that the treatment is the same in both cases: the distinction is important merely with reference to the prognosis—a recurrence of the complaint being less to be apprehended in spina ventosa than in cancer.

It must not be imagined that, however numerous may be the varieties of cancerous disorder attacking the lower jaw, any of them can be subdued by a mere operation. But the operation may be modified with advantage in different cases. If, for example, the disease be limited to the alveolar ridge, we may remove the part either with the lenticular knife, or the bone forceps and a strong file. When the surface merely of the bone is affected, it must be scraped, after extirpating the soft parts; and in both cases, when there is any reason to suspect that the osseous tissue is more deeply engaged, red-hot iron should be applied to the denuded surface, in order to make the cure complete. But when the disorder has seized the whole thickness of the bone, a more serious operation is required, — there is no alternative but to amputate the entire part.

Fungus hæmatodes of the lower jaw—Extirpation—Cure.

We shall now give a case possessed of a certain degree of interest, owing to the difficulties of diagnosis which were experienced in it. It was a case of fungus hæmatodes developed in the substance of the lower jaw. A girl of 14, who did not seem to be more than 10, entered the Hôtel Dieu on the 1st of August, 1829. She had a tumor behind the lower lip, which it pushed prominently forward; it formed a projection in front of, and below the tongue, and had been growing for no more than six months, nor had it given her any severe pain. The incisor and canine teeth were irregularly set, and loose, as if they were imbedded in soft wax; the gums were elevated, and had at their internal base a number of prominences of a deep red colour. The same appearances marked the outside of the gums. On taking two opposite points of the jaw and pressing them against each other, as is done in order to hear the crepitation when fracture is suspected, a slight sensation of motion was perceived; but what was a very characteristic symptom, taken along with the colour and form of the tumor, a fluctuation was perceptible on pressing alternately before and behind. This is a very frequent

phenomenon in those degenerations of tissue known by the name of fungus hæmatodes. But it is very difficult to distinguish a real from a seeming fluctuation, and the most expert practitioners have been deceived in it. M. Dupuytren's plan on such occasions is to employ the *explorative puncture*. Trying it at the lower part of the tumor, behind the teeth, it gave egress to nothing but blood, a little less ruddy than the arterial, but more so than the venous fluid. Not a drop of pus came away. Hence it was clear that the tumor was not owing to a deep abscess, and it was quite certain that it was fungus hæmatodes. An operation—the only resource—was immediately decided on, and it seemed to promise favourably, for there was no glandular enlargement at the base of the jaw; the integuments of the chin were quite sound, and the girl, though thin and ill-grown, did not appear to have any inward complaint.

In proceeding to operate, it was necessary to extract the first molar of the right, and the canine of the left, side. This done, and a vertical incision having been made on the median line, the periosteum was cut through with a bistoury. But to be brief, all the parts which seemed diseased were carefully removed; no accident followed the operation; the needles were withdrawn on the sixth day, when the reunion was exact. The cure went on rapidly, and the young patient was able to leave the hospital in perfect health on the 10th September, nineteen days after the operation.

Inspection of the part removed confirmed all our suspicions of its nature. In the very interior of it there was a part about the size of a hen's egg, the colour of wine-lees; its texture was like that of the spleen; it was gorged with blood, and pervaded in all directions with fibrous filaments. The cause of the fluctuation was very apparent.

Consequences of the operation, immediate and remote—Retraction of the tongue.

Among the accidents which often ensue after an operation of this kind, some are immediate, and take place the moment the bone is cut through; others are consecutive, and do not occur sometimes till long after the operation. Primitive hæmorrhage is an accident of the first sort; but the most dangerous is the retraction of the tongue, which is principally occasioned by the glosso-pharyngeal muscles, which draw the base of the organ backwards and downwards, and fix it strongly against the pharynx, so as to preclude the air from entering the glottis. This accident arises from the antagonism of the genio-glossus, hyo-glossus, and stylo-glossus, being taken off the moment they are divided in the operation. Death may be the consequence, and some German surgeons were so alarmed at the possibility of such a fatal accident, that they gave up the idea of the operation altogether. But it does not constantly happen, nor even as often as might be expected. It is chiefly when the whole body of the jaw is removed that it is to be apprehended; yet even this has been done very often without the occurrence of the accident. When the disease is more on one side than the other, in the removal the retraction is not likely to occur. Besides, there are means of remedying such an occurrence. Upon detaching the soft parts from the bone, M. Dupuytren usually causes the tongue to be fixed by its extremity caught in a dry napkin: in a few minutes the organ resumes its equilibrium, and there is no longer any danger. In one remarkable instance, Delpech passed a gold thread through the frænum of the tongue, and fastened it to the sutures made in the integuments: he subsequently found it necessary to attach it to the stump of the jaw. M. Lallemand was obliged to perforate a section of the air-passage on a patient of his, who fell senseless under the operation.

Secondary hæmorrhage, violent inflammation, œdematous angina, and difficulty of deglutition, are among the consecutive accidents. For the angina, laryngotomy may be required. The difficulty of respiration, which also sometimes occurs, has led many surgeons to think, that in practising amputation of the lower jaw, we may be exchanging one disease which is certainly mortal, for another which may become so by the occurrence of asphyxia. Such fears are assuredly exaggerated; for in the course of cicatrization, the divided extremities of the genio-glossus and the genio-hyoid attach themselves to the internal or posterior surface of the new chin: they thus re-acquire a fixed point, and the infirmity vanishes. Besides, the numerous and permanent successful terminations effected by M. Dupuytren and his followers, reply victoriously to every objection and to every theory.

Such are the principal considerations which the amputation of a portion more or less considerable of the lower jaw, under various circumstances, has furnished to M. Dupuytren. He has already performed the operation eighteen or twenty times. One patient only was consecutively affected with severe inflammation at the base of the tongue, and with œdematous angina: he died. In two others, the cancer, after having appeared to be radically cured during several years, broke out again, and made new and fatal progress. But in all the others the amputation was crowned with success, and the cure com-

plete. In some, the excision was practised immediately anterior to the large molaris on each side. Such was the case in a man who was presented some years ago to the Royal Academy of Medicine, before the operation, and after the cure. In all, the two ends of the jaw approached, and became indissolubly re-united by a sort of callus.

Disarticulation of the lower jaw.

Hitherto, we have only considered removal of the body of the jaw, in consequence of affections of this part of the bone. But it may be conceived that the same diseases are frequently developed at other points, and surgeons have consequently counteracted them by the same means. Emboldened by the success of which we speak, they are no longer content to remove the chin between the anterior openings of the inferior dental canal—they have ventured to cut through the bone close by its branches, and they have done so with success. In consequence of such results, they have gone so far as to believe that they might remove, after having disarticulated it, one entire half of the jaw; and already has this bold operation been performed three times by Mott, of Philadelphia, three times by Cusack, of Dublin, once by M. Gensoul, of Lyons, once or twice by Gräfe, of Berlin, and once at La Pitié at Paris; in all, ten disarticulations of the jaw are known to have been practised with various successes. Nay more, it is said that Walther, and subsequently Gräfe, (Archives Générales, t. xiv. and Journal Hebdomadaire, t. iv.) have had the hardihood to remove the whole of the lower jaw, after having disarticulated it on both sides. Walther had, as a preliminary step, tied both primitive carotids. These facts appear almost incredible, and it is difficult to imagine how the patients could survive so formidable an operation. However this may be, it is evident that the different seats and progress of the malady must occasion various shades of difference in the manner of operating, and these have been reduced to the five following:—1, Removal of the middle portion of the bone; 2, removal of the entire horizontal portion; 3, removal of one half of the horizontal portion; 4, disarticulation of one half of the jaw; 5, disarticulation on both sides, and removal of the entire jaw.

The cases in which the removal of a portion of the jaw-bone becomes necessary, are those in which there exists chronic caries, which cannot be cured — deep-seated necrosis, involving a large proportion of the bone — fractures and luxations in which the fragments project much, and present great resistance to their reduction — spina ventosa — osteo-sarcoma — preternatural articulations following ununited fractures — comminuted fractures, such as result from warlike projectiles, &c.

The choice which the surgeon ought to make with respect to the kind of operation, depends less on the nature of the affection itself, than on the circumstances which accompany it, namely, the extent, depth, and severity, of the local disease—the effect it produces on the constitution of the individual, &c.

Operation in a case of extensive destruction of the lower jaw from a gun-shot wound.

A dragoon fired a pistol under his chin. All the soft parts were carried away, and the entire left side of the lower jaw broken and destroyed, as well as the anterior part of the right side. The lower lip was wholly destroyed. A considerable opening extended from the situation of the free edge of this lip to near the os hyoides, and stretching from the left commissure of the mouth to the right, constituting an immense gap, in which the tongue, palate, all the upper teeth, and the isthmus of the throat, were seen. On the right, the portion which remained of the jaw yielding to the action of the muscles, was pulled up, in such a manner as to occasion great pain, and opposite the approximating of the edges of the wound. This condition had existed for three months, when the patient was sent to M. Dupuytren by M. Larrey. After having examined the parts with care, he conceived the idea of trying the following operation:—

The patient was seated on a chair, his hands being retained behind him by an assistant. An incision was made transversely with a straight bistoury, extending from the right commissure to near the angle of the jaw. The external in axillary artery was divided and tied. The flap which covered the branch of the lower jaw was dissected: the body of the jaw which was pulled up by the muscles was now forcibly depressed by an assistant: a chain-saw was passed from above and carried beyond the last molar tooth. At a few strokes this part was detached. The deformity was thus in part removed, the opening was lessened, and the edges relaxed. A stilette, heated to whiteness, was applied to a dental artery which bled freely. This was the first stage of the operation.

The second part of the process was as follows:—The left border of the cicatrix was traced with a strong bistoury from below upwards throughout its whole extent, and the same was afterwards done on the right side. It appeared still very difficult to approximate them; but by removing a fleshy projection remaining at the upper and inner part of the right lip, the parts were brought sufficiently even to ad-

mit of one needle being introduced, after which six were successively placed one after another, and thread twisted round them, each progressively diminishing the size of the opening. The transverse incision still remained, but the greater laxity of the parts rendered it more easily dealt with. Needles were introduced perpendicularly, so as to bring the edges together.

The operation being completed, the deformity no longer presented any thing hideous in its aspect: the artificial mouth was round, and always open, but not so as to allow the saliva to escape. The patient was laid on the back, with the head turned a little back to prevent the saliva from wetting the edges of the wound. Next day there was considerable pain, swelling, and tension of the parts, with fever; but these symptoms had subsided by the fourth day, and union by the first intention had begun to take place.

IODINE IN SALIVATION.

In a recent number of Hüfeland's *Bibliothek der Practischen Heilkunde*, is a note strongly recommending iodine in cases of severe salivation, which is represented as removing the most violent inflammation of the salivary glands, and even healing ulcerations produced by mercury, within a few days. The dose, two grains a day, increased to four; and the following is the formula:—Iodine, gr. v., dissolved in Alcohol, ℥ij.; Cinnamon Water, ℥iiss.; Syrup, ℥ss. To be taken in doses of half a table-spoon, and gradually increased.

LATE MR. BROOKES.

To the Editor of the Medical Gazette.

Sir,

I am requested by some of the pupils of the late Joshua Brookes, Esq. F.R.S. to invite (through the medium of your journal) a Meeting of the Profession, to take into consideration the means of placing, in St. James's Church, Piccadilly, where he is buried, a Marble Bust, executed by Sievier, as a tribute to the memory of one of the most indefatigable and scientific anatomists of his day.

I cheerfully accede to the request, and most sincerely hope that his old pupils and the members of the medical profession generally will patronize the undertaking; and in this hope I invite their attendance at a Meeting, to be held in the Museum, Blenheim-street, Oxford-street, on Thursday next, Oct. 10, at 11 o'clock, forenoon, when an opportunity will be afforded us publicly to appreciate departed worth, as exemplified in the life of that eminent Anatomical Teacher, whose persevering and successful labours are now diffusing advantages in numerous spheres of professional practice.

I have the honour to remain, sir,
Your obedient, humble servant,
John Kendrick, M.R.C.S.

12, Manchester-street, Manchester-square,
October 3d, 1833.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Oct.* 1, 1833.

Abscess	3	Fever, Typhus	4
Age and Debility	51	Heart, diseased	1
Apoplexy	5	Hernia	1
Asthma	16	Hooping-Cough	10
Cancer	4	Inflammation	36
Childbirth	5	Bowels & Stomach	10
*Cholera	25	Brain	4
Consumption	81	Lungs and Pleura	12
Constipation of the Bowels	3	Liver, diseased	10
Convulsions	38	Locked Jaw	1
Croup	2	Measles	12
Dentition or Teething	9	Miscarriage	1
Dropsy	11	Mortification	5
Dropsy on the Brain	25	Paralysis	2
Dropsy on the Chest	2	Rheumatism	2
Dysentery	1	Small-Pox	4
Epilepsy	1	Stricture	1
Erysipelas	3	Thrush	2
Fever	13	Tumor	1
Fever, Scarlet	5	Stillborn	24

Increase of Burials, as compared with the preceding week . . . 102

* This week's Bill comprises the burials in the parish of St. Andrew, Holborn, for 10 weeks, and includes 16 deaths by cholera; no report having been received from the clerk of that parish from the 23d of July.

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Sept. 1833.	Thermometer.		Barometer.	
Thursday . 26	from 44	to 65	29·72	to 29·74
Friday . . 27	41	62	29·60	29·51
Saturday . 28	39	63	29·57	29·63
Sunday . . 29	37	63	29·77	29·97
Monday . . 30	34	62	30·02	30.07
Oct.				
Tuesday . . 1	33	61	30·11	30 13
Wednesday 2	33	59	30·15	30·06

Wind variable, N. prevailing.

Except the three last days, generally cloudy; rain at times on the 28th.

Rain fallen, ·05 of an inch.

Charles Henry Adams.

NOTICE.

We have to apologize to many of our valued correspondents for the postponement of their original communications. The space which we have given this week to the Introductories, and other matter of immediate interest, left us no alternative.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 12, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Introductory Lecture.

Gentlemen,—That branch of the medical profession which we are about to enter upon as the subject of the following course of lectures, by having been, until lately, held in very unmerited contempt, has laboured under disadvantages from which other sciences have been exempt. In so degraded a light, indeed, was the art of midwifery regarded, that even so recently as the year 1778, M. Roussel de Vauzesme, in his treatise on the Section of the Symphysis Pubis, declared it was considered, even by men in other respects very well informed, to be "futilis, inanis, imòque exitiosa." But now that prejudice has given way to right reasoning and more liberal opinions, midwifery, instead of being regarded as an art requiring but a slight knowledge of the powers of nature to understand, is taught and studied as a liberal and useful science, calculated to afford comfort and protection to the most interesting part of the creation, at a time the most perilous and painful.

I shall beg your attention, gentlemen, in the first place, to a rapid sketch of the rise of this department of medicine, and afterwards offer for your consideration a few remarks, intended to place before you the injustice and danger consequent upon adopting the sentiments of those men who look upon the practical obstetrician as occupying the lowest station in medicine, unworthy to enjoy the honours attached to the respective corporate bodies to which he may happen to belong.

Although, as an art, midwifery has existed from a very early period of the world, it was scarcely cultivated as a science till the commencement of the last century; its progress by no means corresponded with its importance, or kept pace with the other branches of medicine;—many causes contributed to withhold from the medical world an acquaintance with the science of midwifery. An idea of its inutility was a great bar to its improvement; but its being principally practised by women who had received no education, and whose only qualification consisted in the scanty knowledge they had been able to acquire while employed about the persons of parturient females, cannot but be considered as the chief impediment to its advance.

In the early ages, we may presume that women mutually afforded to each other those soothing attentions of which, under labour, they stand so eminently in need, until some one, more bold or experienced than the rest, professedly took upon herself the duty of assisting at the birth of children.

That this was the commencement of the art of midwifery, is evident from the histories of the Hebrews and Egyptians. In Genesis we read that Rachael, the wife of Jacob, in her second labour, and Thamar, the wife of Er, son of Judah, were attended by professed midwives. In the first chapter of Exodus, again, we have another proof of the practice being in female hands. We are there informed that Pharaoh, being alarmed at the rapid increase of the Israelites in Egypt, commanded the two Hebrew midwives, Shiprah and Puah, to destroy all the male Jewish children at whose births they officiated.

We are in possession of abundant evidence to shew that midwifery was held in considerable estimation among the Greeks, even had we not the direct assertion of Pliny to that effect. The names of some of their practising midwives are still preserved—such as Aspasia, mentioned by

Ætius, and Phanarete, the mother of that most amiable and enlightened of all the Heathen philosophers, Soerates. Hippocrates, Plato, Aristotle, and Galen, also frequently allude to midwives and their duties.

At Rome, we learn it was the eustom for women to be delivered by female praetitioners: in the comedies of both Terenee and Plautus (who, of all the aneients, give us the most correct idea of the familiar habits of that great people), mention is often made of midwives; and Pliny speaks of two by name, who enjoyed a high reputation in his day—Scalpa and Statira.

We eannot but regret that the arduous duties which occasionally devolve on the obstetrieal attendant, should have remained for so many centuries exclusively in the hands of uneducated women; for we may readily imagine that they were perfeetly incompetent to grapple with difficulties, or avert danger; and we have good reason for believing that they were frequently rash when they ought to have been eautious, and tardy in cases which required active interference. The simple reception of the child, on its expulsion from the vagina, they were quite able to undertake, and were even bold enough to adopt the custom of dividing the funis; but when any thing unusual occurred, they were compelled to seek the assistance of surgeons. As the cases, however, that were thus accidentally thrust upon the observation of the professors of surgery were always of an alarming, and frequently fatal, nature, and as midwifery was not considered a lucrative braneh of the profession, it is not surprising that men engaged in eonstant practice were deterred from, rather than excited to, a cultivation of the art.

We have no account of the time at whieh the division of the funis was first praetised: the origin of that custom is lost in the depth of ages. That it was universal in Greece is clear, from the term familiarly used to designate midwives; they were called *ομφαλοτομαι*—that is, literally, navel-cutters. But from the works of Hippocrates we gather, that it was the praetice to leave the funis undivided until after the placenta was expelled. The prophet Ezekiel is probably the first author who has directly alluded to this part of the midwife's offiee. In the 16th chapter, likening Jerusalem of old to a negleeted infant, his simile is conveyed in these words: "In the day thou wast born, thy navel was not eut." This inspired writer flourished about the year of the world 3350, or nearly 200 years before the time of Hippoerates, and 600 before the Christian æra.

Hippocrates is the oldest writer from whom we ean glean any information respecting the praetiee of his own and anteeedent ages. This highly-revered physician was born at Cos, one of the islands in the Ægean sea, now ealled Zia, at that time subjeet to the Athenians, and died in the ninety-ninth year of his age, 361 years before the birth of Christ. He was cotemporary with Soerates, Xenophon, Plato, and Aristotle; and proud indeed might Athens be, in numbering among her subjects, at the same time, five sueh distinguished philosophers. Justly does he deserve to be styled the father of physie, for his works were, for many centuries, almost the only guide both of authors and practitioners;—by ineessant applieation, he enriched his naturally powerful mind with a store of useful information, and his observations were founded on the solid basis of personal experienee. He may, indeed, be regarded as an illustrious example of aneient medical knowledge, but his acquaintance with practical midwifery was by no means great; and to quote him as an authority on this subject in the present day, would be absurd. It is easy to account for the great difference, observable in the works of Hippocrates, between the graphie faithfulness by which all his deseriptions of disease are characterized, and the crude, meagre, and erroneous doctrines on most subjects eonnected with practieal midwifery. He studied disease personally, and transcribed with amazing fidelity the symptoms which he himself observed. In midwifery he had no such opportunity, and his preeepts were either copied from the vague works of previous authors, or collected from the still less satisfaetory source of verbal reports.

After the death of Hippoerates, four hundred years passed without adding any fresh information or new discoveries of consequence to what was already understood of medicine; and midwifery, in partieular, reaped no further advantage till the age of the Roman Emperor Tiberius, within the first half century of the Christian æra, when Celsus arose to enlighten mankind by his vigorous and comprehensive mind, and to add a fresh laurel to the literary wreath of his country. He wrote essays on almost every philosophic subject which eould be treated of at that period: all these unfortunately perished during the barbarous ages, with the exception of his treatise *de Medicinâ*, which has always been referred to as a work of standard merit and authority. There is little doubt that he was a practising physician. He was one of the few early authors who treated midwifery with method, and he first exalted it to a state somewhat worthy of the name of science. Among other excellent and original remarks, he,

in opposition to his great predecessor, Hippocrates, declares delivery of the infant by the feet to be practicable and safe. He expressly says, " in pedes quoque conversus infans non difficulter extrahitur, quibus apprehensis per ipsas manus commode educitur." It is true that Celsus made this observation only in reference to a dead child, but he must have known that it was equally applicable to the case of a living one. He has also furnished us with some important advice on the use of the crotchet, the soundness of which is confirmed by the practice of modern times; and he has given us special directions to separate the head from the body in transverse presentations, when the fœtus is dead; an operation which, although not generally necessary in these cases, has been occasionally adopted of late years with most beneficial results.

After Celsus, the name of Paulus of Ægina, (an island in the Ægean sea, now called Engia,) who flourished about the beginning of the seventh century, presents itself to the medical historian, as worthy of remark. He is said to have been the last of the old Greek medical writers: he was a man of considerable abilities, and superior to the prejudices of his time; he studied nature closely, and, by lessening the number of instruments then in use, added much to the improvement of midwifery.

Fortunate would it have been for modern times, if the whole knowledge which the ancients possessed had been preserved, and rendered available to succeeding generations; but the march of literature and science received a sudden and overwhelming check by the hand of Saracen fanaticism. The Caliph Omar, on the sacking of Alexandria, in the year 640, with unexampled barbarism despoiled its extensive and valuable library, which had been accumulated by the persevering industry of many centuries, by the taste, learning, and munificence of many kings; and when he devoted this intellectual treasure to the flames, he observed that the books, if they agreed with the Koran, were useless, and need not be preserved; if they differed with it, were impious, and ought to be destroyed. A thick an impenetrable gloom succeeded; most of the useful and ornamental arts were lost, and the religious establishments of the Christians became in time the sole depositories of learning.

It is not to be supposed, however, that this act of wanton barbarity overthrew at once all traces of scientific lore: the learned men who had established themselves at Alexandria, where literature was fostered, were driven from their place of refuge, widely scattered through distant nations, and wherever they wandered disseminated a portion of the knowledge scraped together under the protection of the Ptolemies. Thus other countries derived some advantage from the downfal of this splendid city. But that gain was trifling, in comparison with the immense sacrifice at which it was procured. We cannot wonder that the individual exertions of these learned exiles, however zealous they might be, dispirited and in poverty, were insufficient to stem the tide of bigotry that surrounded them. We find, therefore, that throughout the many centuries, emphatically termed the dark ages, science struggled under every possible disadvantage against the combined powers of ignorance, intolerance, superstition, and tyranny; and was emerging from this dreary waste with a slow and unsteady step, when the brilliant invention of the art of printing, by Faust, a citizen of Mentz, about the year 1442, gave birth to a most powerful engine towards the diffusion of knowledge.

From the time, indeed, that literature fell into the hands of the Arabians, more than two centuries passed before any person came forward to unite the links of science, which their ruthless ferocity had severed. At length Rhazes appeared as a writer on medicine, and some subjects connected with midwifery. Although the oldest, he is perhaps the best of all the Arabian authors: he dedicated a whole book to the diseases of children; the first instance of the kind we meet with among the ancients.

Rhazes was born at Rei, a city of the Persian Track; he died, æt. 80, A. D. 932.

Next in order followed Abu Ali Hassein Ebn Abdallah Sina, better known to Europeans under the more harmonious corruption of Avicenna; but his works, which are most voluminous, abound with marvellous and incredible stories, and, to become possessed of the few grains of gold that occasionally sparkle in the mass, much valueless dross must be sifted and refined. Haller says of him, with more truth than elegance, " mihi supra omnem patientiam loquax, et diffusus videtur." Infected with the spirit of the age, he constantly steers from the simplicity of nature, and prides himself on the adoption of some new instrument. To him, indeed, we are indebted for a contrivance that suggested the idea of our present forceps. Avicenna lived at Ispahan, and died in the 428th year of the Hegira, A. D. 1036.

About a century after Avicenna, Albucasis, also an Arabian (described in the ancient MSS. under the title of Abûl-Câsem Chalaf Ebu-Abbas Al-Zaharavi), published on midwifery; but he added little to the stock of obstetrical information; he trod exactly the same path as his

predecessors, and his mind seems to have been principally directed towards the invention of instruments to meet real or supposed dangers. This author lived at Cyropolis, a city of Media, on the Caspian Sea, and was known also by the name of Alsaharavius. He died A. D. 1106.

Under such guidance it is not surprising that the practice of the Arabians proved fatal to mankind: it was stamped with cruelty, and justly cast an opprobrium on our art. In vain did this nation attempt to establish the empire of sciences; their rapacity and predatory dispositions ill suited the calm and laborious application necessary for the acquisition of true knowledge. Even those scientific pursuits in which they acquired some degree of proficiency—geometry and astronomy—were applied by them to the base purposes of trickery and deceit—to awe the vulgar, and keep the vanquished in subjection.

The character of the Arabian physicians has afforded a very fruitful ground of controversy to the historians of their times; some showering on them extravagant and undeserved praises, while others (as Guy Patin) deny them the least credit. This inconsistency probably arose from the manner in which their works were compiled. They all more or less transcribed (in many instances verbatim) the descriptions and doctrines of the older Greeks, without any kind of acknowledgment; and thus some of their commentators, looking upon their writings as original productions, have attributed much merit to the authors: but those who discovered the source of their information, regarded them as mere translators, or plagiarists.

To the Arabians we certainly owe the first account of the small-pox; which was perfectly unknown to the Greeks, and seems to have sprung up in Egypt in the time of Oman, successor to Mahomet. We are also indebted to them for the introduction of some of the spices and milder purgatives into the materia medica. The art of extracting sugar was invented by them; and they first employed syrups in medicine instead of honey, which had been always used by the Greeks.

Surgery, indeed, they improved but little, unless we consider the multiplication of violent and dangerous operations an improvement; and midwifery seems actually to have retrograded in their hands.

Such is the view of this interesting branch of medicine presented to us by ancient history.

In 1532, Eucharius Rhodion, a German, published the result of his experience in a book much extolled at the time, and soon after translated into the Latin and French languages. The first publication on midwifery in the English tongue appeared in 1540; it was entitled "The Byrthe of Mankinde, or the Woman's Booke, by Thomas Raynold, Physition." The estimation in which it was held is proved by the many editions through which the work passed; it indeed led the practice of the day till Ambrose Parey turned his attention to midwifery. Parey was surgeon to the Court of France during the reign of five kings, of whom Henry IV. was the last; he was a man of considerable abilities, and as a surgeon justly eminent. He seems to have borrowed largely from the Greeks and Arabians, and closely followed also the German author, Rhodion. The operation which he recommends, of turning the child and delivering by the feet, when the arm originally presented, forms almost an æra in the history of midwifery. So obvious, indeed, are the advantages of this simple practice, that by suggesting its adoption, and shewing the ease and safety with which the operation may be performed, Parey has raised his name to a level below very few medical authors, either in modern or more early times; but, captivated by the parade and display of instruments, he encouraged to an extreme degree the prevailing surgical taste of the day. His elevated rank contributed, no doubt, in no small degree to his reputation; for such is the weakness of human nature, that high station alone too frequently commands the respect and admiration of mankind, whilst unobtrusive merit, unless, indeed, fostered by the genial hand of power, languishes unknown, neglected, and despised.

To the illustrious Harvey, the discoverer of the circulation of the blood, who devoted much of his time both to the physiological and practical departments of obstetric medicine, this branch of the profession is greatly indebted. Many of his works perished in the confusion of the wars consequent on the murder of his prince, the unhappy Charles; but among others, his Treatise on Generation, and his Exercitatio de Partu, still survive, splendid monuments of his zeal, industry, and ability.

About the end of the seventeenth century Mauriceau published an entire system of midwifery, in Paris, which far surpassed every book that had preceded it, both in judgment and minuteness. He was, perhaps, too fond of the use of instruments; but when we consider the age in which he wrote, we must award great credit to Mauriceau.

Cotemporary with Mauriceau, in Paris, lived Dr. Chamberlin, a celebrated accoucheur in London, who boasted the possession of an instrument by which lingering labour might be much facilitated. One of his three sons, who were all engaged in the practice of midwifery, was invited to

Paris by Louis XIV., for the purpose of divulging his secret to Mauriceau, and a thousand pounds were offered as his reward, provided the instrument answered the high expectations formed of it; but employing it in a case at the Hôtel Dieu, quite unfitted for its use, he failed in his object of delivery; its reputation in France was lost, and he in consequence obliged to return. This instrument, there is every reason to believe, was a modification of the forceps. The English practitioners, however, derived one great advantage from Chamberlin's visit to Paris, although so vexatious to himself: he procured a copy of Mauriceau's work, of which he published an English translation immediately on his return to Britain.

Until this period females were exclusively employed in cases of common labour, surgeons being applied to only on the appearance of danger or difficulty. Maria Theresa, of Austria, the wife of the monarch just mentioned (Louis XIV.) was always attended during labour by a female. It may be presumed that her example influenced the ladies of her court, and through them the women of the city in general; and it is known that the same custom prevailed in England, as well as throughout the Continent. The first authenticated instance of the employment of a male practitioner under childbirth, independently of any surgical operation being anticipated, happened at the Court of France during the same reign, in the first labour of Louise, Duchesse de la Valière, the king's favourite mistress. She was delivered, in 1663, of Louis de Bourbon, who died an infant. Julian Clement, her attendant, was soon after appointed to the new office of accoucheur to the princesses of France, and was employed in all her subsequent labours. On the occasion of his first attendance the greatest secrecy was observed; the lady was enveloped in a veil, and Louis himself is supposed to have been secreted in her chamber.

Clement soon saw the absurdity of treating puerperal women as if they were diseased, and was the first to suggest the propriety of rupturing the membranes in cases of hæmorrhage before delivery, which practice was so successfully adopted by his pupil and successor, Puzos, and so much improved upon by our own countryman, Rigby. Thus, then, was the fashion of employing male accoucheurs in ordinary cases set by a lady of the French Court; and being in time adopted by the nobility of that nation, became afterwards general among most classes of society.

About the commencement of the last century the different nations of Europe first considered midwifery worthy of cultivation; and Deventer, who was originally a watch-maker, published an excellent work in Holland in the year 1701, which was translated into the English language in 1729. He formed a very just idea of natural labour; and his remarks are well worthy of attention.

The institution of the Royal Academy of Surgery in Paris, the erection of hospitals, and the reading of public lectures on the science of medicine, tended much to its improvement; and it is not surprising that our art participated in these advantages. From such combined circumstances its value became more generally appreciated; and from this time may be dated its proper estimation, and consequent utility.

La Motte was the next French writer of consideration after Mauriceau; he published a collection of observations on midwifery in 1715, for which, as well as his strictures on Mauriceau's work, he is entitled to much praise. He appears to have been the first man who considered midwifery in a mechanical point of view; and he first properly pointed out the relative size and proportionate figure of the fœtal head, as regards the pelvis.

In the year 1745, Dr. Astruc, although not an obstetric practitioner, was appointed by the Faculty of Medicine at Paris to the professorship of midwifery, then first instituted; this duty he performed very creditably, and laboured to simplify the art by introducing mechanical principles.

Midwifery now began to throw off the cloak of mystery in which it had been so long enveloped, and the other nations of Europe followed the praiseworthy example of the French. Ruysch, a man of great discernment and medical knowledge, was elected lecturer at Amsterdam; hospitals for lying-in women were erected in Prussia; and, in 1751, George II. of England, appointed Rhoederer professor of midwifery in the University of Gottingen, which he had founded in the year 1737. Before this time the English had made rapid progress. Dr. Mawbray commenced teaching in London, at his house in Bond-street; and in 1723 published a book called "The Female Physician, or the whole Art of New Improved Midwifery." Chapman was the second public English lecturer; he first openly described the use of the forceps. His treatise on this improvement in midwifery appeared in 1733. In 1742 the art was still further enhanced, by the publication of Sir Fielding Oulde, of Dublin.

The first attempt at the establishment of an hospital for parturient women, in London, was under the auspices of Sir Richard Manningham, in 1739. He appropriated a ward in the parochial infirmary of St. James, Westminster, to that specific purpose.

The labours of our countryman, Smellie, and more especially of the two Hunters, have added much information of the most important kind to this department of the profession. Smellie's observations, as those of a practical midwife, are of the utmost value; and the important changes effected on the female body by conception and utero-gestation, have never been so clearly nor so fully demonstrated, as by Dr. Hunter. Smellie's series of engravings gives an excellent idea of the different positions of the fœtus under labour, and particularly well demonstrates the application of the forceps. Dr. Hunter also published a collection of plates, which, as works of art, are far superior to Smellie's, and equally valuable for correctness. It might well be deemed presumption in me, gentlemen, were I to suppose that on such men as the Hunters, any praise I have it in my power to bestow could cast an additional lustre; but I trust there is not an individual practising the medical profession in Britain, who does not acknowledge with pleasure the obligations he himself owes, as a practitioner, to these illustrious brothers, and who does not also feel proud of the benefits they have conferred, by their splendid discoveries, on society at large. I never revert to the history of their lives without a glow of enthusiasm and veneration—veneration on contemplating their powerful and well-directed talents, and enthusiasm at the bright example they have left for the emulation of posterity.

We must close our more particular account of the authors who have enriched this branch of medicine, for the present, with the names of Drs. Osborn and Denman. Osborn's essays, for clearness of description, taste, and elegance of style, have never been surpassed in English medical literature; nor has Denman's work, as a system, been yet equalled in arrangement, perspicuity, and practical information. His classification of labours, from its simplicity, is by far the best adapted for practice, and will be adopted as the arrangement of the ensuing course.

In addition to the great authorities already noticed, the science of midwifery has reaped considerable advantage from the pens of Drs. Young and Hamilton, of Edinburgh; Drs. Clarke, Merriman, Davis, Lee, and others, of London—among whom I may perhaps be allowed to mention my father's name; Levret, Baudelocque, Madame Boivin, and many authors of France; Mr. Burns, of Glasgow; Dr. Rigby, of Norwich; Dr. Dewees, of Philadelphia, and several practitioners, to enumerate whose names would be drawing too deeply on your patience.

From the observations which I have laid before you, gentlemen, you may perceive how comparatively few years have elapsed since midwifery was first viewed in a scientific light; and we may reasonably be astonished that, in so short a period, the profession should have attained its present eminence among the sciences.

Many men, even of great attainments and deep erudition, observing with what ease and safety the process of parturition was accomplished in the brute creation, and reasoning also from the improbability of the supposition, that nature would leave her most important work, the extension of the species, imperfect, unless assistance was offered by man, have presumed that human parturition, if left entirely to nature, would be perfected with equal facility and safety, as the same operation in the lower animals. From this opinion, which is founded on superficial observation, and an imperfect knowledge of the subject, they have drawn conclusions false in point of fact, and tending directly to injure, not only the art of midwifery, but the best interests of humanity.

That all other animals bring forth their young with greater ease and safety than woman, is a fact not to be denied. If it cannot, therefore, be established, that this circumstance depends upon some peculiarity in the form and structure of the human body, different from that of quadrupeds; if it cannot be proved that human parturition must of necessity be more difficult, dangerous, and painful, than the same operation in any other class of animals; if it can be with truth asserted, that it is always easy and safe—that nature is never in want of assistance to accomplish delivery,—then, indeed, practitioners in midwifery may be considered of secondary importance in the general profession. But if, on the other hand, it can be proved that women in childbed are frequently placed under sudden and imminent danger; that certain physical causes conduce, in a high degree, to render the process of even a natural labour painful and tedious—if, moreover, we can demonstrate, that there is a disease peculiar to the human species, which, when it unfortunately attacks the female body, renders every subsequent labour not only difficult, but dangerous in the extreme, so that the mother and her offspring must necessarily perish unless assisted by the timely intervention of art—if it can be proved also, that the effects of this terrible disease can be relieved, and frequently totally prevented,—then, I think, I am warranted in declaring that midwifery, as an art, is not inferior to surgery itself, and, as a science, is worthy the attention of the most enlarged and philosophic mind.

But the study of midwifery is not directed to the superintendence of wo-

men during the parturient state alone;—presuming, for the sake of argument, that its only object was to co-operate with nature, and assist her when necessary, to alleviate the sufferings and diminish the danger of the travailing woman, it is even then evident that the art would be most beneficial to mankind; but its usefulness is not confined to the hour of labour. In its more extensive meaning it comprehends a knowledge of all the diseases to which the female body is more particularly liable; it includes the direction and management of women, from the commencement of the pregnant to the conclusion of the puerperal state: as well also the treatment of the diseases of infancy and early childhood.

We are taught in the Mosaic writings, that the dreadful doom, "in sorrow thou shalt bring forth children," was announced to our first parents as a punishment annexed to the fallen nature of man, and was intended to exist in force so long as the world endures. We can be at no loss to discover the physical cause of this terrible denunciation. We know that man is endowed with a superiority over every other order of terrestrial beings, both in intellect and form; and it is this very superiority, this "erectus ad sidera vultus," which exposes women to pain and danger in childbirth, from which the subordinate quadruped is almost entirely exempted.

The comparative ease of parturition in the lower animals is incompatible with the peculiar advantages attached to the upright position; the very laws of nature prevent their existing together in the same subject.

To exemplify this statement more clearly, we must observe, that during pregnancy, and especially the latter period of utero-gestation, the powerful effects of gravity must be counteracted, otherwise the womb with its contents, being unsupported, would prolapse, and thus premature labour would be a very general, if not inevitable, consequence.

To guard against this accident nature has instituted many laws in the structure of the female body, and of the head of the child, which, while they effectually answer the end proposed, unavoidably produce those very dangers and delays ever attendant on human parturition.

Observe this hollow mass of bones placed at the lower extremity of the trunk in the skeleton; it is called the pelvis; and through its cavity the fœtus must pass at birth. This organ is so situated that its own axis is in a very different direction from the axis of the trunk of the body, by which arrangement any thing passing through the trunk in the direction of the axis of the trunk, would impinge on the anterior part of this continuous bone. In this way during pregnancy the womb is perfectly supported. Further, the axis of the superior aperture of this cavity is almost directly opposed to the axis of the inferior one. A line drawn through the centre of the superior axis would cross at an obtuse angle a line drawn through the centre of the axis of the inferior aperture; consequently, any thing which descends into the cavity, instead of falling through, would rest upon the lower end of the bones, at the back part, the point of the coccyx. With the same intentions nature has been obliged to vary the forms and capacities of these different apertures, making a narrow and a wide diameter to each, and so arranging those that they should be in direct opposition to each other. Thus a line drawn along the wide diameter of the upper would cross at a right angle a line drawn along the wide diameter of the lower aperture. From this peculiar formation it was necessary to adapt the shape and volume of the child's head to the cavity in such a way that it cannot enter by its own weight: it requires the powerful and continued contractions of the uterus, aided by the abdominal muscles, in order that it may be propelled through the brim; and even then it must take a particular form, and be changed as to its position, before it can ultimately be expelled. Thus, then, the actual formation of the bones becomes a great impediment to the passage of the child; but to give an additional degree of support to the gravid uterus, the parts contained within the cavity of the pelvis are of a firm and rigid texture, dilating always slowly, frequently with considerable difficulty, and sometimes they are found to be so unyielding as not to permit the passage of the head without actual laceration.

Contrasting this state with the parturition of the quadruped, we immediately observe, that owing to its horizontal position, the uterus, during gestation, is entirely supported by the abdominal parietes; it is not necessary, therefore, to counteract the effects of gravity upon the pelvis, on which account the parts concerned in labour are not subjected to the same nice and minute laws: the axis of the trunk, pelvis, and external parts, are placed very nearly in the same line, so that the direction of the fœtal head in labour is never changed; the linings of the pelvis are more relaxed; the head of the fœtus, also, may be formed less in comparison than the head of the human fœtus; and as the resistance offered to the propelling powers is but trifling, less exertion is necessary to effect the expulsion of the uterine contents.

The difference in the structure of, and the greater disposition to relax in the soft parts, also, satisfactorily explain why a laceration, which, from ignorance or inattention, sometimes occurs in the human subject, very rarely or never happens in quadrupeds—a circumstance seized upon by those inclined to degrade our profession, as a proof of the superiority of the powers of unassisted nature over all the care and exertions of art. From observation, I have little doubt, also, that the human uterus is more sensible than the same organ in the inferior animals; hence, therefore, we may partly explain the fact of human parturition being so much more painful than the same process in brutes.

It is now evident why the act of parturition, even when most natural and easy, should be attended with such different degrees of painful sensation and delay in the human subject and the quadruped; but I have before hinted, that a disease exists which always extends its baneful influence to childbearing, to such a degree, indeed, as frequently to bring the life of both the mother and her offspring into a state of imminent danger.

It is well known that one of the most tedious and difficult cases met with in the practice of midwifery, is produced by a relative disproportion existing between the fœtal head or body to pass through the pelvis, and the pelvis or cavity through which that body has to pass. This disproportion is the effect of disease, and almost always to be relieved by art; when, therefore, we see a fellow-being in a situation of danger, from which death alone could liberate her, if left to the efforts of nature,—while we know, at the same time, that by our science we can most probably restore her to health, safety, and the affections of her family, how false and absurd does such an assertion appear, as is conveyed in the few words formerly quoted, that our assistance is "useless, trifling, and even destructive." In addition to the other impediments, it cannot be denied that a high degree of civilization has considerably increased the natural difficulties which retard the natural process of childbirth: even other animals, in a state of nature, bring forth their young much more easily, and with less injury to the system, than those whom man has domesticated. We learn from the narrative of travellers that the North American Indians retire alone into the woods to produce their offspring, and again return to their usual occupations. That death must sometimes happen, even in this almost pristine state of society, is certain, from the original formation of the woman, and the connexion existing between her and her infant; for it is evident that human nature, in its most perfect state of physical strength, free from disease and unimpaired by intemperance, cannot always succeed in accomplishing delivery without involving the mother in considerable hazard. A savage life is certainly not natural to man; yet there can be no question that many diseases and casualities incident to the human frame, are produced and nurtured by the luxurious mode of living attendant upon a refined state of civilization.

In confirmation of these accounts, which are not always received by the fireside philosopher with the credit which they frequently deserve, I may be allowed to mention an anecdote related to me by a very intelligent American, who four or five years ago was a pupil of this class, and is now prosecuting the practice of physic in his own country. This gentleman, in October 1822, was sailing down the American river St. Lawrence, in company with a party of natives: among them was a pregnant female, who complained of being ill, was landed, retired a little distance from the shore, and returned in an hour to the boat, which waited for her, with an infant, that she had just brought into the world. I place every reliance on this statement. I hold in my hand my pupil's original account, written in French, and he assured me the occurrence was by no means looked upon as extraordinary by the people with whom he journeyed.

There is also another circumstance rendering human parturition particularly dangerous, to which for the most part the quadruped is not liable: I allude to those sudden and excessive discharges of blood, reducing in the shortest space of time the circulation of the patient to the lowest ebb, and not unfrequently terminating in the most disastrous manner. This arises from the peculiar mode of connexion existing between the mother and the human fœtus, which is essentially different from that in most other animals. Such hæmorrhages by timely interference may be restrained, or altogether put a stop to; but if unchecked by art, would seldom cease whilst life animated the body.

With these facts presenting themselves in such a self-evident light, it is really astonishing that men can still be found to decry our department of the profession, by reasoning analogically drawn from the parturition of brutes; and that some incorporated societies should consider obstetricians disqualified from holding the honours attached to their respective bodies. Such are the false principles which have swayed the two learned and highly-respectable Colleges in this city—such are the notions which have so materially tended to the in-

jury of our art; as if attendance on a woman under the pains and perils of childbirth required less knowledge and firmness than some of the more simple duties of the surgeon; or as if it were either a less difficult or a less important matter to put a stop to uterine hæmorrhage, than to secure an artery, or restrain any other discharge of blood.

It surely can be no disparagement to our profession that it is calculated to relieve only one half of the human species: it must be borne in mind, that the objects of our care are of the weaker and the softer sex, and that our assistance is required at a moment of intense interest as well as danger: such an argument, moreover, might be answered by an appeal to the fact, that in one case we are called upon to take charge of two beings, each frequently under a state of danger; and as two lives are of more importance than one, in the same ratio should midwifery be esteemed.

Believe me, gentlemen, in entering on the practice of obstetrical medicine, you are voluntarily taking upon yourselves a task of great responsibility: a practitioner in this department of physic ought to be thoroughly acquainted with his profession, since in the progress of the most natural labour symptoms may arise, to subdue which will require the promptest hand, the firmest mind, and most judicious management; and so suddenly does the danger sometimes appear, as to preclude the possibility of obtaining additional assistance. The attendant is therefore thrown entirely on his own resources, and the life of his patient will often hang upon the knowledge he has acquired while studying the principles of his profession. His behaviour should be conspicuous for a kind attention to the suffering objects of his care, and he must remember, that, since from the nature of his profession, he must be constantly intrusted with the closest secrets of the woman, so his professional and moral character is the only guarantee on which she can rely for the assurance that her confidence is not abused. He should trust to nothing but his own knowledge and rigid sense of duty, and if in the execution of that duty he be ever compelled to perform any menial, and apparently degrading offices, he must not forget that the welfare of his patient requires such a sacrifice of his feelings.

To fulfil my intentions of communicating what knowledge I may possess in the clearest and most intelligible manner, it is proposed to pursue the following course:—

The anatomy of the parts concerned in parturition will first be described: we shall not be detained long with this part of our subject; but, to use a common illustration, as it is impossible to explain the action of any complicated machine put in motion by a hidden power, unless we examine minutely its different springs and component parts, so it is impossible to acquire a knowledge of the secrets of any part of the animal economy without an adequate acquaintance with anatomy. In surgery, an anatomical knowledge of the parts concerned is absolutely necessary to the success of an operation; so in midwifery, unless we make ourselves conversant with the form, size, and relative situation of the pelvis and its contents, we are erecting our superstructure on a sandy and perishable soil.

We shall commence, then, by studying the bones of the pelvis, which we shall demonstrate separately; afterwards we shall view them in their collective or united state, by which means we shall be enabled to point out the dimensions and proportions of the female pelvis; and we shall mark the distortions to which that organ is subject. When we have made ourselves acquainted with its different capacities, we shall take a view of the fœtal skull, its shape and dimensions, and compare these with the dimensions of the pelvis.

A description of the female organs of generation will next occupy our attention, the physiology and pathology of which will be distinctly considered, particularly the uterus and its functions: under this head we shall include menstruation, and notice the irregularities to which the female body is exposed in the performance of this function.

We shall then speak pretty fully of the organic diseases of the uterine system, such as carcinoma, polypus, hydrops ovarii, and the like.

Having described the womb and other parts of generation in their virgin state, and fully noticed their diseases, we shall next consider the impregnated uterus, take a critical review of the theories of generation, and we shall trace the ovum from the earliest period of conception to the time when utero-gestation is completed. We shall demonstrate the uterus, with its contents; describe the placenta and the fœtal circulation; point out the peculiarities observable in the system of the fœtus, and endeavour to account for its nutrition.

We shall enumerate the various diseases to which the impregnated state is liable, and the means of relieving them; and offer some rules for the management of pregnant women.

After this we shall be prepared to enter upon the more operative part of our course:

we shall mark the division of labours, as instituted by Denman; give a full history of natural labour; and point out the means of assisting nature in the various cases of difficulty.

Having made ourselves as well acquainted as description will allow, with those cases which require manual or instrumental interference, and with the proper mode of applying our assistance, we shall speak of the management of women after delivery, and the accidents which sometimes happen under labour. The diseases of the puerperal state, and the most approved method of treatment, will next come under review.

We shall add the management of children immediately after birth; the imperfections and deviations from nature which we sometimes find existing in the fœtus; and the diseases to which the infant state is exposed.

During the progress of the course, we shall have an opportunity of exemplifying our remarks by referring to an extensive collection of preparations, both natural and morbid, immediately necessary to the study of our profession; and I shall have it in my power to offer those of you who wish to avail yourselves of the opportunity, a sufficiently extensive field of actual practice, from my connexion with charitable institutions in this neighbourhood.

As being subservient to practice, this course will be principally practical. Theorizing has now, indeed, become nearly a by-word in medicine, and, among practical men at least, the character of a great theorist is almost synonymous with that of a great blockhead. For my own part, I confess myself an advocate for rational speculation; if established on facts and well directed, it will generally lead us into the high road to truth, and at all events produces in the mind a habit of thinking, which can scarcely fail to be attended with valuable results. For these reasons we shall direct so much of our attention to puerperal physiology as will enable us, in some degree, to understand and rightly appreciate the wisdom and beneficence of nature, as exemplified in her chief work, that of reproduction.

I have no theory to establish, nor any particular doctrine to advocate; I trust, therefore, you will consider my observations unbiassed by prejudice—that you will rely on such facts as will be laid before you, and use your own judgment in forming your opinions.

Should I ever unfortunately render myself not quite understood, you will find me at all times ready to explain, to the utmost of my power, any difficulty that may present itself to your minds.

ON THE

EARS OF THE HADDOCK AND THE HERRING.

By James Sym, M.D.

The ears of fishes are said to have neither tympanum, ossicula, nor cochlea. I have been led to doubt this; and in order to excite attention to this subject I shall describe in the haddock and herring parts which seem to me to be connected with the organ of hearing, but to which either no use, so far as I I am aware, has been hitherto assigned, or which do not appear exclusively adapted to the functions they are supposed to perform.

1. On removing the integuments from the head of the haddock we bring into view a canal on each side, commencing at the snout, and extending to the back of the head. A membrane stretches across the upper surface of this canal, except between the orbits, where it passes for a short way under a bridge of bone. Its walls are processes from the bones of the head, throughout the greater part of its extent; but about half an inch from its posterior extremity, though still composed of bone, it ceases to be connected with the cranium, and lies upon the muscles. Here it gives off from its mesial side a short parallel branch, of very delicate structure, communicating with it at right angles by a narrow neck, and lying loosely under the integuments.

The extremity of the principal canal, and the whole of its mesial branch, lie in contact with a crooked bone, consisting of a roundish body, and two long processes, which form an acute angle with each other, and terminate, the one upon the upper surface of the cranium, the other upon its posterior surface, where it contains the internal ear. The body receives and supports the end of the canal in a cuplike cavity, whilst the superior process stretches along its mesial branch, being at the same time connected with the muscular fascia, and at its point with the pericranium. The inferior process terminates upon the portion of the case of the internal ear that contains the sinus, near the origin of the superior and lateral semicircular canals, and is attached to it by a strong ligament in such a manner as to admit of motion. A second bone, shaped like

a pen, and hollow, articulates by a flat surface with the body of the first, opposite to the cuplike cavity, and stretches to the upper angle of the scapula, with which it is connected closely by muscular fibres originating in the hollow of its bevelled extremity. A long slender tendon passes from the middle of this bone, by the edge of the scapula, to the top of the anterior aspect of the spine.

These bones have been regarded by Cuvier as pertaining to the scapula, and the use assigned to them is to suspend the pectoral fin from the cranium. Now it appears to me that the second bone forms too slight a connexion between the first and the scapula to warrant the assumption that their sole use is to support the anterior extremity, whilst that membrane is sustained independently of them by the sternum and the muscles of the back, in the same manner as in other classes of animals. The precision with which the inferior process of the first bone is united to the exterior of the labyrinth in other fishes as well as the haddock, points rather to the ear as the organ to which they are especially subservient; and whilst in this view they are analogous to the ossicula of reptiles, birds, and the mammalia, the peculiarity of their situation adapts them to the habits of the fish, and the circumstances in which it is placed. When the haddock swims through the water sound is communicated by the pulses of that element beating upon the membranous covering of the canal, and exciting synchronous movements in the delicate elastic shells of bone which compose the free extremity of the canal and its mesial branch: from these they are received by the superior process and body of the first bone, and made to impinge upon the case of the labyrinth by the action of the blunt point of the inferior process, which thus performs the office of a stapes. When it rests on the bottom of the sea, its sternum conveys to the scapula and second bone such sonorific pulses as pass through the solid ground, and the inferior process of the first bone again imparts those pulses to the case of the labyrinth. Serpents are furnished with a similar provision; the malleus, from their having no sternum, being connected with the lower jaw, which rests upon the surface of the earth, and thus constitutes the medium whereby sound is transmitted from the ground to their internal ear. Nor is man himself altogether destitute of a faculty which is indeed more appropriate to reptiles: the Indian is warned of the approach of his distant foe by placing the side of his head upon the ground, from which the pulses are communicated through the elastic septa of the mastoid cells to the incus, and thence to the fenestra ovalis and labyrinth.

2. In the herring there is no elastic canal under the integuments of the head, but the other bones are still present, and terminate upon the exterior of the labyrinth, exactly as in the haddock. In the herring, however, I am much deceived if there are not parts adapted to the reception of sound from the air, and which have been regarded as peculiar to animals inhabiting that element: these are, a tympanitic cavity and a cochlea.

Immediately behind the orbit, precisely in the situation of the auditory foramen of the frog, there is under the integuments an irregular orifice, which opens into a triangular cavity stretching to the upper edge of the orbit. The roof of this cavity sends down a small process which divides the external aperture into two parts—the anterior round and direct, the posterior oblong, with a waving elevated margin, and leading obliquely forwards. On removing the triangular roof, we find that the lower compartment of the cavity dips inwards to the vestibule, from which it seems to be separated by a delicate membrane occupying an oval aperture; and on passing a bristle through this, it enters the pulpy contents of the internal ear, between two beautiful hollow spherules of bone, which I cannot help regarding as the cochlea of the herring.

The anterior spherule is about a line in diameter, and one of its hemispheres presents within the vestibule, whilst the other forms a projection under the cranium. The posterior spherule is placed higher upon the side of the head, where a segment of it is seen externally rising above the lateral semicircular canal, by which it is embraced. Each of these spherules is composed of a thin hard shell of bone, and contains a brilliant elastic membrane, which seems to be distended with air, as it becomes opaque when punctured. The anterior has two orifices—the one within the vestibule, and the other the entrance into a minute canal which leads to the posterior, and forms the only aperture in it that I

have been able to detect. This canal gives off a branch in a direction outwards and downwards, where it enters another hollow bone, from the cavity of which a fine bristle may be made to emerge in the skeleton from an orifice near the back of the base of the skull: in its structure it resembles the sphericles, and it seems to be lined by an extension of the same brilliant elastic membrane, but it is much smaller, and its figure is oblong, instead of a sphere.

The situation of the orifices behind the orbit, the size of the chamber into which they open, and the slightness of the partition by which it is separated from the labyrinth, leave little room for doubting that those orifices constitute the external auditory foramen, and that this chamber is the tympanum. Since, however, the unknown functions of the cochlea have been ascribed, by some physiologists, to the lapilli of fishes and reptiles, perhaps this may be considered a sufficient objection to our regarding the sphericles as analogous to that organ. But when we reflect that the anterior sphericle, like the cochlea, opens into the vestibule—that the cochlea, in its simple form, consists merely of two hollow cylinders or cones, making an angle with each other at their point of junction—and that the sphericles contain a membranous apparatus, which does not seem to be intimately connected with the bone—I think we have good grounds for suspecting that these sphericles are analogous to the cochlea. Besides, an intelligible use may be discovered for the lapilli, arising from the circumstances of those animals in which they exist. They are only found in fishes and reptiles; and they seem destined to exempt the expansion of the auditory nerve with which they are invested from participating in the general vibrations imparted by the ground or water to the bony case and pulp of the internal ear. If the whole expansion of the nerve moved along with the pulses of the bones and their contained fluid, it could not receive pressure from such a motion common to itself and the contiguous parts: but by suspending the lapillus in the surrounding fluid, by means of fine threads of cellular membrane, it is isolated from the case of the internal ear, and, like the nautical astronomer's chain, it remains unaffected by the oscillations of the parts in its vicinity. The fluid, accordingly, vibrates across the furrows of the quiescent lapillus, the necessary re-action is offered by the nervous expansion, and the pulses produce the sensation of sound as effectually as if they had been received through a fenestra ovalis, from the ossicula contained within a tympanum. It would hence appear that the lapillus becomes necessary when the sonorific pulses are communicated to the bony case of the labyrinth; and that it is unnecessary when they are concentrated upon the membrane of a fenestra ovalis.

The herring, swimming along the surface of the sea, is thus furnished with the means of hearing sounds transmitted through the air; as it seems to possess, besides the ossicula, both a tympanitic cavity and a cochlea.

Ayr, September 1823.

Fig. 1.

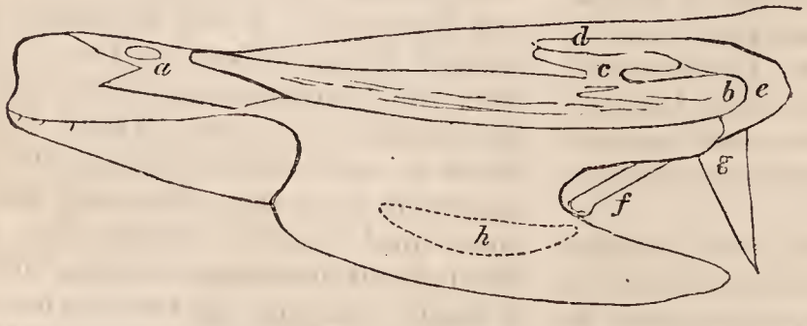


Fig. 2.

Fig. 1. *Cranium of a Haddock.* — *a b c*, canal: *a*, bridge of bone; *b*, posterior extremity; *c*, mesial branch. *d e f*, crooked bone: *d*, superior process; *e*, body; *f*, inferior process. *g*, second bone connected with scapula. *h*, lapillus, seen through transparent case of internal ear.

Fig. 2. *Part of Cranium of Herring.* — *a*, external auditory foramen; *b*, cavity of tympanum; *c*, anterior sphericle; *d*, posterior ditto; *e*, oblong hollow bone; *f*, a dotted line, shewing the course of the canals by which these bones communicate with each other; *g*, orifice communicating with *e*; *h*, lateral semicircular canal; *i*, superior ditto.

TUMOR ON THE CAROTID—REMOVED.

To the Editor of the Medical Gazette.

Sir,

If you think the following case worthy of insertion in your valuable publication, be pleased to insert it at your earliest convenience.—I am, sir,

Your obedient servant,

Isaac Lyon, M.R.C.S.L.

Hull, Sept. 24, 1833.

E. E., æt. 18, a thin rather pale-looking girl, resident a few miles from this town, applied to me to examine her neck, where I found a tumor on the right side. She stated that she had had it about four years, that it had gradually increased, that it had given her very little pain, and that she had been under many practitioners, both in medicine and surgery, who had endeavoured to disperse it, but without effect. With this view, leeches, tartar emetic ointment, iodine ointment, and poultices, had been applied externally, and iodine given internally. On examination I found that the tumor extended from the angle of the jaw obliquely towards the larynx, situated between the sterno-mastoid muscle and the larynx, from which it was distant about half an inch. It did not extend at all into the mouth. It had an elastic feel, as if it contained a softish matter, and appeared about the size of a hen's egg; the skin over it was not in the least discoloured. As the girl's health was good, and as so many methods had been tried in vain, I recommended an operation, to which she readily consented. This was performed on the 3d of August last, having given her the previous day an active purge. My much-valued friends, Mr. Sherwin and Mr. Henesy, surgeons in this town, and several young men, were present during the operation.

I began by making an incision through the skin, about three inches in length, extending from about half an inch below the ear to within half an inch of the larynx, opposite the thyroid cartilage. I next made an incision through the platysma myoides, which formed a complete covering to the front of the tumor, and afterwards dissected it out very carefully from its connexions, without once wounding the sac. The sac was surrounded by many veins, which I endeavoured to avoid, in order that I might not be troubled with any hæmorrhage during the operation; but, unfortunately, I divided one, which in the sequel proved a source of great trouble to me, and delayed the healing of the wound above a month. No ligatures were required, as there was only one artery divided, and that only of a moderate size. The tumor was situated directly upon the carotid artery, at its bifurcation.

On examining the wound left by the operation, the following parts were seen: the carotid at its bifurcation, for about an inch in its course; at the outer part of the wound, and at the upper part, the digastric muscle and the lingual nerve. A good view of these parts may be seen in Burns's Surgical Anatomy of the Head and Neck, plate vi. The edges of the wound were drawn together by three sutures, and strips of adhesive plaister, and a compress of linen, laid over the whole. I then gave her three grains of solid opium. On opening the tumor it was found to consist of a thin sac, containing a matter very much resembling custard; it was therefore of the atheromatous species of encysted tumor. On the following day I removed the compress. On the 6th I removed the upper suture, and on the following day the other two, when I found that the upper two-thirds of the wound had healed by the first intention. On the 8th, which was the first day that I allowed her to rise out of bed since the operation, there issued out, from where the lowest suture had been, a few drops of dark-coloured venous blood. I applied a compress to stop this. It continued, however, at intervals, until the 14th, about half a tea-spoonful issuing out every day. I this day made a most careful examination, when I found that the bleeding proceeded from near the angle of the jaw, where I remembered to have divided a vein during the operation; so that although the incision had healed externally nearly throughout its whole extent, there was a sinus running up two inches under the skin. This was a most mortifying circumstance, as, had it not been for this, in all probability she might have returned cured to her friends within a fortnight from the operation. On the 15th there was no oozing of blood, but a discharge of three or four drops of pus. I had intended this day injecting an

aqueous solution of nitrate of silver, but thought it unnecessary. On the 16th the oozing had returned; I therefore injected a solution, containing four grains of nitrate of silver to the ounce, and applied a thick compress, secured by means of adhesive plaister and a bandage. On the 18th, the oozing still continuing, I injected a solution containing eight grains to the ounce. On the 24th, being desirous of returning to see her friends, I allowed her to go, as there was only a small sinus left, about half an inch in length. She returned on the 5th September, when the sinus had healed; but there was left a wound about the size of a sixpence, with everted edges, and a good deal of irritation about it. This I touched with nitrate of silver, and dressed it with Ung. Cera. spread on lint. On the 14th it was perfectly healed. There now only remains to be seen of the whole wound a line where the incision was made, except at the point of the lower suture, where there is a reddish mark about the size of half a sixpence.

In any future case of a similar nature, I should keep a compress upon the wound for a week at least, in order to produce adhesion between the opposed surfaces, and to prevent hæmorrhage. Had this been done in the present case, I should have been saved a great deal of trouble and anxiety; for if I had not been able to produce adhesion by injection and compression, it would have been a most disagreeable circumstance to have been under the necessity of making a fresh incision to produce healing by granulation from the bottom of the wound, particularly as the patient was a female, and the part to be operated upon the upper part of the neck.

NEW RECTUM BOUGIE.

To the Editor of the Medical Gazette.

Army Medical Department,
October 3, 1833.

SIR,

I BEG leave to transmit you herewith a copy of a letter received from Dr. John Murray, dated Cape of Good Hope, 3d July last, relative to a rectum bougie recently invented by Mr. Poleman, of that place; and I have to request an insertion of it in your valuable periodical publication, so far as you may deem it worthy of notice.

I shall be happy to show you a specimen of the bougie if required.

I have the honour to be, sir,
Your most obedient servant,
J. M'GRIGOR,
Director-General.

(COPY.)

Cape of Good Hope,
July 3d, 1833.

SIR,

I beg to send you a specimen of *Rectum Bougies*, of a very superior kind to any that I have ever before seen or heard of, which have been recently invented by the ingenious Mr. Poleman, apothecary, of this place, from a description I gave him of the requisite qualities of such instruments.

They are formed of the thick hide of the rhinoceros or hippopotamus, which can be made hollow, if required; and their superiority consists in their flexibility and elasticity, (admitting of modification in these respects to almost any degree by the application of moist and dry heat;) and in their not being liable to crack, or otherwise spoil by use.

I have had occasion to make a trial of them in a severe and intricate case, for which indeed they were expressly made, and I am happy to say that I found their advantages over the other kinds of rectum bougies to be such, that I consider the invention as one of very great value, and highly deserving of being made generally known to the profession through the medium of the periodical press.

In the case above alluded to, I also made dilatation of the stricture by means of a piece of prepared ox's intestine introduced upon one of these bougies, or upon a gum elastic bougie, and afterwards distended with water—a method which I think extremely beneficial and easy.

Bougies for the urethra, of any size, can be made of the same material quite as good as the gum elastic sort, and I would only suggest, as an improvement, their being varnished.—(Signed)

JOHN MURRAY, M.D.

Sir James M'Grigor, &c. &c.
Director-General of the Army
Medical Department.

ANIMAL CHEMISTRY—PRESENCE OF UREA, ELAIN, &c. IN THE BLOOD.

To the Editor of the Medical Gazette.

Sir,

We feel sorry that your correspondent, Mr. Rees, in his zeal to overthrow our objections to the presence of urea in the blood of the majority of patients affected with anasarca and coagulable urine, cannot confine himself to facts. We unequivocally deny that those objections rest solely on the peculiar reaction of nitric acid on the fatty matter of blood, or on the odour of urine evolved by digesting the same acid with an animal matter likewise present in serum. If candour and not bigotry influenced him in argument, he could not pass over unnoticed the serious sources of fallacy adverted to in our last communication. The three tests which he has, in our presence (and we call upon him, if he can, to deny the fact), stated to be characteristic of urea,—viz. the evolution of ammonia when the crystals are heated with caustic potass, their fusion and dissipation by heat, and the crystallization by nitric acid,—have one and all been proved to be fallacious. As this subject has been already discussed, we need not go over the ground again. If Mr. Rees be satisfied with the experiments of others, without investigating for himself, we are not, nor do we consider that we can be, with justice, charged with presumption in pointing out sources of fallacy in the experiments of others, which he may have been too prepossessed to notice.

It appears, we think, a matter of much doubt whether your correspondent has ever seen the fatty matter of blood; for he confesses very innocently his ignorance of the proportion of not only stearine, *but of elain* (which last, we can inform him, is always found in combination with the former), by his stating the quantity of fatty matter present in serum to be almost inappreciable. Now if rather more than 2·40 grains of a light and bulky matter, composed of this mixture of stearine and elain, in 1000 grains of serum of blood (that being the average quantity of fat present), be considered by him as almost inappreciable, we should wish to inquire what is the state of his visual organs, and what the delicacy of his balance.

May we ask, in conclusion, whether he ranks himself in that list of eminent men whom we have been, as he considers, so *presumptuous* as to oppose?

We are, sir,

Your obedient servants,

R. H. Brett.

Golding Bird.

Guy's Hospital,
Oct. 1, 1833.

LIFE INSURANCE—FEES.

To the Editor of the Medical Gazette.

Sir,

The subject of life assurance having been strongly urged on the notice of the public, and its real importance having been justly and duly estimated, the number of offices established for that purpose, and of individuals who have sought to be admitted as members, has increased within the last few years in a most extraordinary degree. I need not observe to how great an extent the increase in numbers and business of these offices must have added to the professional calls on the medical practitioner; neither need I to inform you nor your readers that these appeals to his skill and judgment have always been *gratuitously* attended to. This point was ably commented on some time back in your journal, the numbers of which I am at present unable to refer to; and I had hoped the discussion might have led to some beneficial result; but as since then a total silence has been observed, and the practice continues unaltered, I wish again to call the attention of medical men to what has become, from custom, a decided abuse of the facility with which they have been always found to offer their gratuitous professional services.

In the infancy of the practice of life assurance, when the calls for medical reports could not be numerous nor burdensome on any individual practitioner, I can well conceive that the answers to the proposed queries would be returned without a thought as to the trouble incurred, and most probably with the idea that he was conferring a favour on his friend and patient *only;* but now that the act of insuring life has very properly and happily become an every-day occurrence, and that the consequent requisitions from different offices form a continued item in the practitioner's routine of professional employment, it is surely a point of justice due to ourselves, that

we should no longer allow a report of so important a nature, and of such vital consequence to the very existence of assurance societies, to be passed over in so trivial a manner, and to be considered as *a slight act of courtesy* to our patient or friend, when it is in reality the essence, the foundation, on which the responsibility of all assurance societies must rest and depend. I can scarcely imagine that any society would be so hardy as to admit a member without a proper medical scrutiny and report; and consequently, if our report were withheld, the society must cease to exist. Yet those societies with whom I have remonstrated on the illiberality of leaving their medical referees without remuneration, seem to think the subject one of very little importance, and affirm that we must seek our reward (if any charge is to be made) from the person offering his life for assurance—that is, from a person who has never employed us on the present occasion, and who is totally ignorant of all that passed between the office and ourselves. The result of such an application must be obvious. Again: one society informs me that they expressly covenant with the assurer that he is to be at all the expense, if ANY (again mark the expression), of producing the required medical evidence. We can, of course, know nothing of any private agreements entered into between these parties: we only know, that, by receiving a long list of most important queries, the answers to which are to be held strictly confidential, we are employed expressly by the office, and by the office *only;* and that the person to whom they wish to refer us for payment is designedly kept in utter ignorance of all we have been doing. To the office alone, then, can we look for payment of our labour; and if they persist in refusing to give our well-earned fee from their own funds, they surely ought to consider it an imperative duty to make such arrangements with the assurer as should guarantee to us our proper remuneration without further trouble or inconvenience.

In the correspondence I have held with different offices, it has been alleged by most of them, that on this point (the payment of medical referees) they act according to old established usage, and the fundamental laws and customs of their society: it would be folly to expect that the objections or implied wishes of an individual should have power to annul or to change these laws. I would therefore earnestly call upon all my medical brethren, of whatever rank or degree, to unite in a remonstrance to every assurance office requiring from them a medical report, and to withhold such report until their just demands are complied with. The many liberal-minded men who have the direction of these offices could not then fail to perceive the propriety of our applications, and their system would of necessity undergo such revision as might prove beneficial to us, and far from inconsistent with the real interests of assurance societies.

I have the honour to remain, sir,
Yours very obediently,
S. HUTCHINSON, M.R.C.S.

Hythe, Kent, Sept. 30, 1833.

SOCIETY OF APOTHECARIES.

NOTE FROM DR. WATSON.

To the Editor of the Medical Gazette.

SIR,

I FIND that, in the lecture which you did me the honour to report in the Medical Gazette last Saturday, I was guilty of an unintentional misstatement. I have just been informed, upon the best authority, that the period of professional education prescribed for all students who are desirous of becoming licentiates of the Society of Apothecaries, was formerly much shorter even than it is at present; and that the Society has never enlarged the objects of study, without at the same time enlarging the term within which they were to be included. When, therefore, I stated that "while an increased amount of knowledge is demanded from the student, the space of time allotted for its acquisition *remains the same as before*," I fell into an error, which I am anxious to acknowledge and to correct, although it does not in any way affect the general argument; for the student must still find himself under an utter incompetency of *mastering*, in the brief space of two years, all the multifarious knowledge which he is required to possess.

I have the honour to be, sir,
Your obedient servant,
THOMAS WATSON, M.D.

Henrietta-Street, Cavendish Square,
October 7, 1833.

MEDICAL GAZETTE.

Saturday, October 12, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE CONVERSION IN GOWER-STREET.

WHILE taking credit to ourselves last week for having modified the tone of opening addresses emanating from Gower-street, we were not quite aware of how much better ground for self-congratulation we were at the moment overlooking. On a more deliberate perusal of Dr. Grant's lecture, into which we had unavoidably glanced rather hastily, we were agreeably surprised to find embodied in that discourse almost the whole essence of the doctrines, regarding the true nature and objects of a metropolitan University, which we had been inculcating for years back. So that here are strong symptoms of returning sense: here is a sign of the subsidence of the "inflated bag," which has been whirling the good people of Gower-street aloft ever since their speculation was set on foot. One of their teachers—the one appointed to show them off before the public on the resumption of business this year—has been listened to while proving the folly and mischief of their wishing to bestow degrees, and to sell professional honours. We can hardly believe our eyes, but shall once more refresh them by a reference to the pages of the lecture itself.

It will be recollected by the readers of this journal, that from the very first talk of getting up an "University," to be embodied in the medical school of a joint-stock company, we set our faces against the bubble; and we showed that it would be the grossest perversion of the desires of the more sober-minded members of the community, to seduce them into the patronage of such a job—to countenance a set of men assuming to themselves a right to originate the honours of the profession, while seeking subscriptions to bring into existence that private school, which they had already dubbed an University. We spared no opportunity of checking this barefaced spirit of assumption, at the same time that we calmly showed the impropriety—the perfect inexpediency—of allowing any body of teachers to exercise the right of appointing what courses should be attended for the purpose of attaining certain distinctions, and to be farther entrusted with the privilege of being the examiners of their own pupils—thus becoming at once contractors for medical degrees, and judges of the commodity they supplied.

We need not, on the other hand, remind our readers, how the interested patrons and shareholders of the speculation, while they ever blinked the discussion of the question on its abstract merits, raved at us, and employed their agents in every possible way to controvert our assertions. One time, "the University of London (meaning the school in Gower-street) was flourishing"—while, in fact, its very vitals were endangered by intestine broils; and again, "it was, and would be, the finest school in Europe"—while it was striving tooth and nail to secure for itself some exclusive privilege to give it the semblance of an advantage over *other* private schools, and, if possible, to secure for its shareholders some return for their outlay.

Well, all this pretension and bombast have come to nothing. They have begun their sixth session *without* privilege, or prospect of privilege, of any kind. They rest, and must rest, on their merits, like any other of the recognized schools of the metropolis; and what is most gratifying to us, as we have no doubt it will prove the wisest

thing they have yet done, they have had the good sense to proclaim it to the world (that is, holding Dr. Grant as their organ), that the possession of such privileges as they have been all along aiming at, would be, in reality, only vanity and vexation of spirit—would be mischievous in the extreme; and they now intend (they say) to confine themselves simply to the business of teaching, and, without further puffing, to co-operate with the other schools of the metropolis in rendering London at large an University, in the genuine and legitimate sense of the word.

Now this is the very thing that we have been endeavouring to attain for this long time past; but we confess the result has been so unexpected—the sudden change, conversion, or reform, effected within the *soi-disant* University, have come upon us so abruptly—as we fancy it has on our readers also—that we shall turn to the recent confesssion of faith, as couched in the introductory lecture of Dr. Grant, and try if we can thence draw any thing to justify the remarkable statement that we have made.

Have we not, we repeat, again and again maintained, that no private school ought to be endowed with privileges which would unjustly give it a regulating power over other establishments of the same sort? and have we not argued again and again, that such a misapplication of influence would prove destructive of the best interests of the public and of the profession? Well, what says Dr. Grant? Hear it, ye lovers of monopoly and exclusive privileges! it has been spoken in the theatre of the school—in the presence of the *Faculty*—of the shareholders; and it has been published under their authority. "The best privilege which an University can possess," says Dr. Grant, "is the means of teaching the greatest number of polite sciences in the most efficient manner; and without the secure possession of these means, *all adventitious privileges and dignities are absurd vanities*, calculated only to benefit a few individuals who may be protected by such privileges—to excite *petty jealousies among professors*, by establishing inequalities of rank—to rouse the *odium of the profession, by a monopoly of privilege and an assumed superiority*—and to *deceive the public with a false show of stability*." In the very next sentence the tone is so humbled as actually to class the Gower-street establishment with "other private schools;" and the learned lecturer goes on to say—"Here no *invidious distinctions* (meaning the long-sought but now despaired-of privileges) have yet sown the seeds of dissension, or damped the ardour of the teacher," &c. He then abjures the idea of annexing "*monopoly, or exclusive privileges*," to the school in question; and congratulates his hearers that it "is based on the *liberality* of its principles—on the *congenial* sentiments of an enlightened public, and its efficiency as a school for the sciences it professes to teach." And so warm does he become in this branch of his subject, that he even ventures to castigate the planners of the "curriculum" for having shortened the period of study in the Gower-street school, in order to accommodate the duration of apothecaries' apprenticeships,—intimating that what they thus did for the sake of gain, they had done against their conviction.

Was the reader prepared for this? To what are we indebted for all this unhoped-for liberality of sentiment? But let Dr. Grant be heard once more, and then let us try to clear up the mystery. Nobody can more explicitly state the inexpediency—the danger—of allowing a body engaged in the business of teaching to regulate the mode of entering into the profession, than does the learned lecturer. "As it is the obvious interest," says he, "of every teacher to

circumscribe the curriculum as much as possible within the limits of his own department, it is as injudicious to leave to them the planning of that curriculum, *as it is to make them also the sole judges of the qualifications of their own pupils for the highest honours of medicine.* If training the youthful mind to the path of usefulness, honour, virtue, and happiness, be the grand object of universities, it tends only to corruption to make them *a mart for the traffic of distinctions, and a scene of mercenary contentions*, however expedient it may be for the state, to enrich them with the profits arising from the sale of honours."

Allowing for the strain of despondency in which the preceding passage seems to have been conceived, the sentiment must be acknowledged to be true in the main; but it consists of such truth as we fancy must have sounded strangely in the ears of the audience. It is, we believe, but too true, that had privileges been bestowed upon this *liberal* establishment, when it was most eager to possess them, the consequences, in the hands of a joint-stock company, might have been such as those described; but this, we must say, scarcely warrants the insinuation conveyed in the above passage, that such has been or such is the result of the possession of privileges by the ancient and venerable Universities of England.

Were it not for blemishes of this sort, and certain inconsistencies which we have observed here and there in the late opening address, we should be satisfied—perfectly satisfied, with the sentiments which Dr. Grant has had the boldness to utter. They are essentially the sentiments and views which we have over and over again insisted on, even when the strain of extravagant pretension and the "sounding brass" of the *soi-disant* University, was at its highest note. To whom the merit of the change that has been effected is due, it is not for us to say. But for our parts, while we make the most liberal allowances for the good sense of the lecturer, we confess we can hardly persuade ourselves that the proprietors are much obliged to him for his confession of faith, or that they will stand by it in their future proceedings. We may be wrong; but if we are, we shall expect to find a stop put to the pertinacity of the honourable M.P. proprietor, who is so anxious to secure for the school the "invidious distinction" of "exclusive privileges," and voting against all old monopolies, would establish a new one more obnoxious than theirs.

This is one of what we call the inconsistencies in Dr. Grant's address. In the opening part of it, he speaks with complacency of the attempt made by Mr. Tooke, in the House of Commons, last session, to procure for the school a charter, with a power of conferring degrees, and he even proceeds so far as to inform us that such a measure "*is said* to be now under the consideration of the advisers of the crown,"—which, by the way, we have reason to believe is a mistake; but let it pass. The complacency to which we allude, along with the general, though greatly modified tone, in which the arrangements of the school are mentioned all through the lecture, is what constitutes to our minds a strong inconsistency. Here is a school in which all the arrangements are stated—by the parties who have the strongest interest in having it believed—to be of a first-rate description. If they be, why contemplate with satisfaction — why hanker after, that very monopoly, and those very exclusive powers, which would place the establishment above the useful competition of rivals? If the managers of the school be sincere—if they stand pledged by what has been expressed in the opening address, and if they *really* believe that "all adventitious privileges and dignities are absurd vanities, calculated only to benefit a few at the expense of the many, and to deceive the public

with a false show of stability," we shall expect to hear no more of those silly attempts to grasp at invidious honours: if we do, what can we conclude but that the sentiments put forth by the opening lecturer were used for a bait—a lure, to lull the vigilance of those who watch over the interests of the public? and the obvious deduction from the whole proceeding—showing, as it will, that those connected with the school in question fear to trust it on its own merits, fairly in competition with its contemporaries—the deduction, we say, must be, that there is "something rotten" in the state of Gower-Street.

But the very fact of advertising, as Dr. Grant does, a "currieulum" peculiar to Gower-Street school—in which, we perceive, that every "professor" takes care to have his own course included—and that *clinicals* are also comprehended in it, while the *Valetudinarium* is still but "the fabric of a vision" —a "currieulum" which is to conduct to the "adventitious privilege and dignity" of "Master of Medicine and Surgery U. L."—what is this but a pretty plain inconsistency, and a contradiction of the liberal sentiments put forth on the occasion? what is it but an aping of those powers which they affect to despise, but which, in reality, they are dying for?

We shall not dwell on some minor points which struck us in the perusal of the address: they may, perhaps, be considered merely as over-statements: though, if we thought it worth while, they might afford us a theme for adding a few more remarks on the policy of the establishment; for they all have reference to the ill-disguised anxiety of its managers to set it, *coute qui coute*, above all the other private schools. It is evident that in the reform which is expected to take place at no distant period in the medical arrangements throughout the kingdom, the gentlemen of Gower-street flatter themselves they will draw a prize—though what *they* have to expect, in the way of exclusive powers, we are at a loss to conceive,—especially if they be in earnest in what they say through Dr. Grant, that among other contemplated changes under the reformed system, is to be the "appointment of *disinterested* boards of examiners for the different degrees of the profession." But, however this be, the lecturer who opened the business of the school, and alluded to the question of reform in his address, was mistaken when he spoke of a Committee of Inquiry having been appointed by the House of Commons. We need scarcely inform our readers that this is not the case;—nay, it is not even yet definitively settled whether the inquiry shall be conducted by a Parliamentary Committee or a Royal Commission.

Another misconception into which the lecturer was betrayed, through his zeal, no doubt, for the *corps* to which he belongs, was in his allusion to the petition of the Licentiates, which he apparently confounded with the memorial of the Teachers in the other great schools, and noticed apparently with no friendly feeling towards the rival in the Strand:—"Forty-nine physicians of known reputation, practising in London, including the heads of most of the medical schools in the metropolis, *excepting King's College*, have petitioned the House of Commons to inquire," &c. Now it happens that the teachers in King's College, who are physicians practising in London, are all, with a single exception, fellows of the College of Physicians, and, therefore, could not well be added to the forty-nine *licentiates* who prayed for an inquiry. Neither need we say any thing of the manner in which the last-mentioned College was more than once introduced into the oration; for that, we think, is a mere matter of taste, though strangely inconsistent with the way in which the College of Physicians was

ultimately mentioned, with reference to the propriety of actually endowing them with the power of conferring medical degrees.

These, however, are trifles. It is to the whole of the oration of Dr. Grant that we look; and we must repeat that it is fully calculated to excite our surprise—our approbation; but we must add, our distrust. With the few remarks we have made, we will leave it to the judgment of the reader; only once more repeating, that if it really contains the sentiments of the proprietors of the school, then do we congratulate those gentlemen on the liberal turn which their policy has taken; and then does our controversy with them cease. We should suppose that this is the proper view to take of it, for the "Faculty" shook hands with the lecturer, as if in cordial acquiescence in the sentiments which he uttered; and *he* did so first, who last year, on a similar occasion, expressed opinions of a very opposite description.

GENERAL DISPENSARY, ALDERSGATE-STREET.

The affairs of this dispensary make about the same progress towards arrangement as does the dispute between Holland and Belgium. The following are the chief points of novelty since last week:—

1. A requisition has been made to call a general meeting, in order to reconsider the whole question.
2. Candidates cannot be admitted except through the medical committee, and the said committee has declined to examine the testimonials of the aspirants.
3. A meeting has been advertised for this day, (*see Wrapper.*) We trust that the result will prove alike honourable to the profession and satisfactory to the parties whose interests it is intended to support.

CLINICAL LECTURE ON UNUNITED FRACTURES;

Delivered at St. George's Hospital, Oct. 1, 1833,

By B. C. Brodie, Esq. F.R.S.

Gentlemen,—I purpose in this day's lecture to call your attention to the case of Henry Day, who was admitted into the hospital on the 25th September. It is one of fracture of the bones of the leg, in which union has not taken place in the same way as under ordinary circumstances, inasmuch as it is not completed at the expiration of the usual period. I wish to draw your attention to this case, not merely because it is interesting in itself, but because it will furnish me with an opportunity of making some observations concerning the want of union in fractures generally, and of explaining to you the circumstances under which it occurs, and the treatment which such cases require.

I will first read the notes which are entered in the case-book. It seems that the patient is thirty-one years of age, a coachmaker by occupation, and that he has been, and appears to be, a healthy man. Fifteen weeks before his admission he was thrown off a carriage; his heel came in contact with the ground, and he found himself unable to walk. He was carried home, and it was then discovered that both the tibia and fibula of the right leg were broken. The limb was placed on a pillow, splints were applied on both sides of the leg, and in this position he remained about eight weeks. But at the end of this time the bones had not united, as it appeared he was still unable to walk, and could distinctly feel the limb bend under the weight of the body. The limb was again bound up, and remained so for another fortnight; and at this time I saw him for the first time, out of the hospital. I recommended the application of the splints with a greater degree of pressure, and that he should also be placed on crutches, and allowed to hobble about; it being intended that the splints should keep the bones perfectly immoveable, although he was in the erect posture. After this he went into the country; but fourteen weeks from the time of the accident—the same treatment having been continued—on examination of the leg, it was found that still no bony union had taken place, and then he was admitted into the hospital. At the time of his admission he was in good health, but considerable motion existed between the fractured extremities of the bone, which

were also in some degree displaced. The tibia appeared to have been broken about the centre, the line of fracture extending from within obliquely outwards and downwards. The lower part of the bone projected above the upper, and a sharp point belonging to the lower portion was perceptible under the skin. There was no shortening of the limb, and the man suffered little or no pain.

Such, then, is the condition of the patient, fifteen weeks after the accident. From the quantity of motion between the bones, it is plain that there is no bony union, but I conclude that there is ligamentous union.

The question then is—in what manner are we to proceed, so as to make the broken bones unite, and give this man ultimately an useful limb?

Now in order to answer this question we must consider,

1st, In what manner do fractures unite under ordinary circumstances?

2d, What are the circumstances under which fractures do not unite?

3d, What are the various means that may be employed for the purpose of procuring the union of a fracture which has not united at the proper period?

Lastly, Which of these various means it will be best to adopt in this instance?

Union of fractures under ordinary circumstances.—It used to be thought, respecting the union of a fracture—and this was Mr. Hunter's doctrine—that when a bone was broken, the blood became extravasated; that lymph was thrown out from inflammation; that the two broken ends of the bone were thus united by the coagulum of extravasated blood, and by the effused lymph; that this uniting substance became organized, blood-vessels being formed in it; and that, by and by, bony matter was deposited in the organized blood and lymph. This is a very simple explanation of the phenomena which occur after a bone is broken; but it is too simple—in fact, it does not correspond with what is found in nature. The real process is one of considerable complication. I made several experiments upon animals, many years ago, with a view to the elucidation of this subject; and some of the results of these experiments are on the table. I had thought at that time of publishing a paper on the union of fractures; but before my investigations were completed, I found the whole matter made out by Baron Dupuytren so completely, that any farther publication on it was unnecessary.

I broke the bones of animals, and examined the appearances at different periods after the fracture. Immediately after a bone is broken, you find a little blood extravasated; in general, also, you find the bones considerably displaced, riding one over another, owing to the animal not being quiet, and the unrestrained action of the muscles. For the first three or four days you see nothing more than you do immediately after the accident has occurred; but after this period there is a little thickening and consolidation of the parts surrounding the fracture, and this thickening extends to the muscles and neighbouring tendons. In the course of a week all these parts become firmly united, consolidated with one another, and there is a soft yet firm substance, something between ligament and cartilage in consistence, which surrounds the broken extremities of the bone. This newly-formed substance adheres to the bone above and below the fracture; the neighbouring muscles and tendons are closely attached to its surface; and the fractured extremities of the bone lie, as it were, loose in a cavity in the centre, with a small quantity of vascular albumen, resembling a semi-transparent jelly.

Here, then, is a kind of natural splint which nature contrives, and which is nearly completed within a week after the accident. We call this new formation the callus. This process goes on, the surrounding substance becomes thicker, and of still firmer consistence; and here [*presenting it*] is a drawing shewing the appearance which the parts exhibit at the end of ten days after the accident. A few days after this you find the thin jelly, which lay in contact with the broken ends of the bone, to have disappeared, and they are united by a gristly substance, or callus, like that which formed the original capsule. Here [*presenting a drawing*] is the appearance which the parts exhibit at this latter period; and this we may consider as the termination of the first part of the process which takes place after the occurrence of a fracture. The broken ends of the bones are, as you perceive, completely imbedded in a mass of vascular organized substance, or callus, something between gristle and cartilage in consistence; and as yet there is no bone. At this time, if you take off the mass of callus, you find the broken ends of the bone retaining exactly their original figure, and presenting exactly the same appearance as immediately after the fracture took place.

At the end of about three weeks, if you make a section of the callus, minute specks of bone are visible, deposited in it here and there; and at the same time some of the callus seems to disappear on the outside, so that the neighbouring muscles and tendons adhere to it no longer. The specks

of bone become more numerous, and larger, until at last the whole of the callus becomes converted to bone. Here [*exhibiting it*] is a drawing representing the appearance of a fracture thirty days after the injury. It is the broken leg of a guinea-pig, and there is a mass of new bone, into which the callus has been converted. Even at this period the union of the broken bone is not completed; for although the callus is all converted into bone, you may with a penknife pick the new bone off the old, and demonstrate the broken extremities of the latter as having nearly their original shape and appearance. Now, then, the broken ends of the bone lie imbedded in a mass, not of callus, but of new bone; and this completes the second part of the process set up for the repair of the fracture.

And now a third series of changes begins to take place. The broken extremities of the bone gradually become attached to each other, by bony matter passing from one to the other; and the mass of newly formed bone which had been deposited externally, in what was originally the callus, being no longer wanted, it becomes absorbed. By degrees the whole of it disappears, and the bone is left, having the dimensions which it had previous to the accident. The preparations on the table, which consist of the limbs of animals examined at various periods after a fracture, shew all the circumstances which I have now mentioned.

Thus it appears that the process by which fractures become united, under ordinary circumstances, may be divided into three series of changes, and that these must follow each other in succession, to complete the union of the broken bone. First, there is the thickening of the surrounding parts and the formation of callus; secondly, there is the ossification of this callus; and thirdly, there is a growing together of the broken bones, and the absorption of the ossified callus.

This process is completed in young persons much sooner than in those advanced in life. In the upper extremities it is completed sooner than in the lower. It is a curious circumstance that, in the lower extremities of man, the process may take, on an average, ten weeks; whereas in the upper extremities of the same individual, it may be completed in eight weeks, or even sooner. In growing children it may be completed two or three weeks sooner than in adults; and in animals generally, but especially in those of the smaller species, union takes place more speedily than it does in the human subject.

Circumstances under which fractures do not unite.—Now, then, let us consider what are the circumstances under which fractures do not unite. Fractures do not unite sometimes, in consequence of the anatomical structure of the parts in which an accident has occurred. The neck of the thigh bone, when broken, does not unite. This observation was made by some of the older pathologists. You will find it noticed by Morgagni; but it was not generally known till the remark was made again of late years by Sir Astley Cooper. It has been a question much agitated, whether bony union of a fracture of the neck of the femur can take place under any circumstances; but I need not enter into the consideration of this question at present. We may be satisfied that fracture of the end of the femur seldom unites; that it does not unite in the same way with ordinary fractures; and the structure in which this particular kind of fracture occurs, explains the circumstance. Fracture takes place in the neck of the femur, within the cavity of the joint. The neck of the femur has a covering of synovial membrane, but there is none of that mass of cellular membrane and muscles enveloping it, in which union begins when the fracture is in the shaft of the bone; and this is a sufficient explanation of the want of union after this accident. If a fracture were to occur in any other bone, which is covered, as the neck of the femur is, by a reflexion of the synovial membrane, I presume the result would be the same; but in the human subject there is hardly any bone, except the neck of the femur, which can be broken under these circumstances. There are, however, some bones which may be thus broken in animals. When I was making the experiments to which I have referred, the fracture was made, as it were, by chance, sometimes in one place, and sometimes in another; for you cannot, of course, make the fracture in the exact part in which you wish to make it. In one experiment, however, the bones of the leg of a guinea-pig were broken close to the ankle-joint. The tibia in these animals is covered by the synovial membrane a little way above the ankle. The fracture, in this instance, took place under the same circumstances as those under which the neck of the femur is usually broken in the human subject; and when I killed the animal, which was some time after the fracture had been made, I found that the bone was not united. The broken ends of it fitted each other so exactly, that there was scarcely any motion between them; the synovial membrane was scarcely torn; the ligaments were not torn; the cancellous structure had become harder than natural, in consequence of the ossification of the medullary membrane; and there was, nevertheless, no union of the fracture.

Fracture of the neck of the femur unites

ultimately by a ligamentous substance, at least it does so in many cases. The ligament is sufficient to bind the bones a little together, but it makes a very different bond of union from that which would be formed by actual bone. This union, even by ligamentous substance, is the result of a very slow process; not being completed for some months.

It is not merely the neck of the femur in the human subject that does not unite in consequence of its particular structure; at least something like this happens with respect to the bones of the cranium. A fissure of the cranium takes much longer to unite than a fracture of the arm. I first noticed this in examining the body of a person who died six months after an injury of the head. I expected to find the fissure in the skull quite united, but I found on dissection there was no union at all. In the Hunterian Museum, at the College of Surgeons, there is a specimen of extensive fracture of the skull indicating the same fact. The skull has been broken in several places. There is no displacement of the broken edges, yet there is no attempt at union. It is evident that the patient had lived a considerable time after the accident, since the sharp edges are rounded off, in consequence of the absorption of the rough edges of the fracture.

You will observe that the bones of the skull have the dura mater lining them on the inside, while on the outside there is the periosteum, and then the tendon of the occipo-frontalis muscle, without any intervening mass of loose cellular membrane. Whether it is to this, or to other circumstances in the anatomical structure of the parts, that the want of union in fracture of the skull is to be attributed, I cannot say; but I have no doubt that this does not unite like other fractures; that is, not at the end of the same period. That which is completed in a few weeks after an accident in other bones, in the skull may require several months. However, union always takes place at last.

It has been said that diseased bones, when broken, will not unite, and I believe this *may* be the case, where there is an abscess in the bone, where there is necrosis, and in some other instances. I know, however, that the rule is not *absolute;* for, in a great many cases where the bone is diseased, it will unite perfectly. I had a patient who had disease of the bones, whether it arose from syphilis, or mercury, or a cachectic state of the constitution, I cannot say; however, some of the bones had nodes upon them, and were very much enlarged. The principal enlargement was in one of the clavicles. There was a portion of this bone enlarged, and much diseased besides. This man, in using his arm, broke the collar-bone, the fracture going through the diseased part. I bound up his arm, and concluded that there would be no union, (this was many years ago); but to my surprise it united quite as soon as ordinary fractures. Women labouring under cancer of the breast are very liable to a similar disease of different bones in the body. Sometimes this disease, which is indicated by pains like those of rheumatism, will affect nearly the whole of the bones, which then become brittle, and very liable to break. I first observed this fact many ago years, in the case of an old woman who was dying of cancer, and who in turning one day in bed broke the thigh bone. I concluded that the broken bone would not unite; but union took place as well as under ordinary circumstances. I attended a lady two years ago, who had cancer of the breast, and pains of the limbs, indicating cancerous disease of the bones. There was a scirrhous affection of the collar bone; and one day in moving her arm, the collar bone was broken: but it united, just as if it had been a healthy bone.

It sometimes happens, when a fracture has been attended with more than usual injury, that a piece of muscle gets between the fractured extremities of the bone, and keeps them asunder. That is quite a different cause of non-union. Cases of this kind are on record, where the fact had been verified by dissection; and I have seen instances where we had reason to believe, on examining the living person, that the same thing had happened.

Then it is usually supposed that a great deal depends upon the limb not being kept perfectly quiet; that if there be not a good apparatus employed, such as will fully answer this purpose, union may be prevented taking place. I cannot say that this may not be a sufficient reason in the human subject, but it is not so in animals; for in them I have tried, over and over again, to prevent union by giving motion to the broken bone several times a day; but I never could succeed by this method, and indeed union seemed, for the most part, to go on more rapidly in animals whose limbs were thus exercised than in others. There was, indeed, a single instance, in which, at the end of the usual period, the fracture was united only by ligament; but the animal was killed early; and it is very likely if it had lived three weeks longer, the union might have been completed. However, the human species differs in many respects from the quadrupeds on which I made experiments, and I would not assert that too great latitude of motion being allowed to the limb after fracture, may not be sufficient in a man to prevent union taking place.

In most instances, however, I cannot doubt that the want of union is to be found in the state of the constitution. A gentleman was growing fat, and not liking to do so, he placed himself on a very spare diet, though accustomed to good living previously. After six months of starvation, he broke his arm, and the bone would not unite. I saw him many months afterwards, and there was scarcely any union, even by soft substance. Another patient about whom I was consulted, a lady, was growing fat, and thought she would also prevent it, by pursuing a similar system of diet. Some months afterwards, she broke her arm, and union did not take place. Cases of ununited fracture are not very common, yet here are two among those which have fallen under my observation, in which the want of union seems clearly to be traced to the bad state of the constitution, produced by an imprudent abstinence from food. A man broke his thigh, his bowels were costive, and his surgeon allowed him to remain without a stool ten days after the accident, and in him the broken bones did not unite. We cannot be certain that it was this long-continued costiveness which prevented the union of the fracture, but it seems probable that it was so.

If loose bandaging may prevent a fracture from uniting, by permitting the bones to have too great latitude of motion, I think it very probable that tight bandaging may in some cases produce just the same effect. If the limb be too tightly bandaged, especially above the fracture, it must have an insufficient supply of blood; and it is reasonable to suppose that if that be the case, the restorative process, which produces union of a fracture, may not take place. I have made the following experiment several times:—I have broken the thigh of an animal, tied the femoral artery, and killed the animal at the end of four days, and found the parts just as they would have been immediately after the injury. I have broken the bones of other animals, and tied the femoral artery at the same time, and then killed them on the seventh day, and still found no commencement of the process of union. But after this period, though the artery be tied, the formation of callus begins to take place, and then the union goes on as usual. At the end of a week, it is reasonable to suppose that the anastamosing arterial branches will have become dilated, so as to make up for the obliteration of the femoral artery; but till there is time for this change in the state of the vessels to have taken place, it appears that the limb does not receive blood enough for the process of union to be established.

Appearances on Dissection of an Ununited Fracture.—The appearances which are observed when you dissect a fracture which has not united at the usual period, are different in different cases. In general, there is union by a ligamentous substance, not by bone. I say *ligamentous*, for we have no other name to give it; but it is not fibrous: it is merely like a firm, condensed albumen, become organized, without a distinct, fibrous structure. In general, there is this ligamentous union; but there are some cases where even this union does not exist, and these are very remarkable. A new joint is formed—absolutely a false joint. The broken ends of the bone become rounded: there is a capsule as thick as the capsule of the hip-joint or shoulder: this capsule is fibrous, like ligament: it is attached to the bones above and below the fracture, and there is a cavity, like the cavity of a joint, in which the broken ends of the bone lie. But there is more than that: the rounded ends of the bone are covered by a thin, ligamentous substance, and the inner surface of the capsule is lined by a smooth membrane, like the synovial membrane, and capable of secreting synovia, and synovia in abundance. The capsule is a new formation; and the synovial membrane is a new formation. It is not to be wondered that a synovial membrane should be formed under these circumstances. It seems very easy for the system to construct a synovial membrane. The bursæ mucosæ are made of synovial membrane, just like that of the joints. There is a bursa between the patella and the skin, and this in housemaids sometimes becomes diseased, and converted into a hard lump or tumor. I have frequently removed such a tumor from the knee of a housemaid, and some time afterwards, on examining the limb, I have been satisfied that the bursa was regenerated; that a new one was formed. But this is not a mere supposition; I have positive proof of a bursa being regenerated. There was a woman in the hospital from whose knee the late Mr. Rose removed an enlarged bursa. A year or two afterwards she returned, and came under my care, and not only had the bursa been regenerated, but the new one had become diseased like the old one, and I had to repeat the operation which Mr. Rose had performed formerly. She had gone back to her former occupation, and the pressure on the new bursa had converted the new bursa into the same diseased structure as the old one. These cases of artificial joints are comparatively rare: the union by ligamentous substance is much more common.

Means to be employed for the purpose of procuring an union of the Fracture.—Now, then,

suppose you are called to a case of ununited fracture, it is a great object indeed to get the fracture to unite; especially when it has occurred in the upper or lower limb. It does not so much matter in a rib. Here is a specimen [*presenting it*] where a joint has formed in the rib after fracture. This patient, I dare say, suffered little inconvenience from the accident. But it is a very different matter where such a case occurs in either of the extremities. The first question which will occur to you, is, whether there be any thing in the state of the constitution to account for the fracture not having united; and if there be, whatever is wrong must be corrected. One patient may require to be put on a better diet; another may require purgative medicine; another may stand in need of tonics. Mr. Wilson used to relate the case of a woman who was a dram-drinker, and who broke her leg. At first she was not allowed to take her customary drams, and the bones shewed no disposition to unite. At last she was allowed to take a certain quantity of spirit, and union took place immediately.

In the way of local treatment, various methods have been recommended by different surgeons, with a view to the cure of these cases. Sometimes it appears that a very little matter will make a fracture unite, which has not united at the usual period. In numerous instances, I have known patients in the hospital kept in bed for ten weeks, and even longer, without union taking place. Here a splint has been bound on each side of the limb; we have put the patient on crutches, made him walk about, put the limb to the ground, and exercise it with the splint on, and the fracture has become united.

Then, in other cases, I have applied blisters to fractures slow in uniting. Mr. Sewell, of the Veterinary College, apprised me of some observations which had been made on animals, from which it appeared that the application of blisters was useful where fractures were slow in uniting; and I have employed them often in the human subject, with very great benefit to the patient. But if this method is to be useful, it must be had recourse to in eight or ten weeks after the accident has occurred.

An operation was formerly recommended, but a very severe one, in which the surgeon cut down on the broken extremities of the bone, turned them out through the wound, then sawed off a portion of each of them, put them back into their proper place as nearly as could be, afterwards applying splints, and treating the case like one of compound fracture; into which it was, in fact, converted. Of course it was supposed that this method would produce a cure. But I have formerly talked to some surgeons of the old school on the subject, and they have told me that they never had known a cure to have been performed in this way, although they had frequently seen the operation performed: and I believe that it is now acknowledged, that the success of this operation is, at the best, very problematical; that it fails, indeed, much more frequently than it succeeds; and no one can doubt that it must be attended with considerable hazard. It is, in fact, such an operation as ought not to be performed in a case where the patient's life is not in previous danger. Sir Everard Home used to mention, in his lectures, the case of a man with ununited fracture of the humerus, who was under Mr. Hunter's care. There was an artificial joint, and Mr. Hunter made an incision into it, and then having introduced a spatula, irritated the whole surface of the artificial joint. This brought on a considerable inflammation, which ended in anchylosis, and thus the patient was cured.

I am not aware that this operation has been performed in any other case. Dr. Physick proposed what appeared to be an improvement upon it. He saw that the only effect of Mr. Hunter's operation was to produce a fresh attack of inflammation, and that this might be equally induced by passing a seton through the artificial joint. This must certainly be a less severe method than Mr. Hunter's, because, when suppuration has taken place, the matter will not be locked up, but must be conducted outwards, in one direction or the other, along the seton. The principle of the two operations, however, is the same; and in all probability, Dr. Physick borrowed the idea from what had been done by Mr. Hunter. Dr. Physick was a pupil at this hospital, and afterwards house-surgeon. He was intimate with Mr. Hunter, and probably was here at the time when his operation was performed. The operation with the seton, as recommended by Dr. Physick, has been tried in this country several times, and I have performed it on three different occasions. The first was in the case of an ununited fracture of the femur. I passed a seton between the broken extremities of the bone, and union did take place, but it was not completed until after a long period of time. I tried it next in another case of ununited fracture also of the femur. It was followed by much disturbance of the constitution. I was alarmed, and removed the seton. The symptoms subsided, but I re-introduced it afterwards, and it was now kept in for a considerable time, the constitution not being

inconvenienced by it. I think the treatment had a very fair trial, but no cure was effected, and the patient went out with the bones just as loose as they were when he was first brought into the hospital. I had a third patient under my care in this hospital, who had broken the collar-bone many years before, but it had not united. There was an artificial joint, allowing considerable motion of the fractured bones. I passed a seton through the joint. It was kept in for several weeks, and a perfect cure was accomplished. Mr. Stansfield, of Leeds, performed the operation on the arm, and it succeeded. Mr. Earle also performed it on the arm, but it failed. The result of the practice in this country appears to be, that sometimes it has succeeded in the upper extremities, but that where it has been performed on the lower extremities, as far as I know, it has only succeeded in a single instance—namely, that of the patient in this hospital, under my care. Dr. Dorsey (who was Dr. Physick's nephew, and adjunct professor with him in Philadelphia), in the last letter which I had from him before his death, informed me, as the result of the operations with the seton in the United States, that it had generally succeeded in the upper limbs, but that it had always failed in the lower. He added, that, in the former case, it was often necessary to keep the seton in for several months. The operation is, to say the best of it, uncertain, and the result tedious.

Another method of treatment has been proposed by Mr. Amesbury, which I believe to have been more successful than any of the other methods which I have mentioned; and which has this recommendation, that if it do no good, it can do no harm. Mr. Amesbury proposes to keep the bones in a state of the most complete repose, by means of a suitable application of splints and bandages; at the same time that the broken extremities are kept very firmly pressed against each other. By this pressure, a fresh inflammation is induced, and the bones are at last found to grow together. I do not know that this firm pressure produces the union of the bone by a process at all like that which takes place in the first instance after fracture, and which I have described. I think it more likely that it causes the surfaces to grow together, without the provisional callus being formed on the outside. However that may be, I know that in several cases it has succeeded. I have attended two cases with Mr. Amesbury, in which this plan was adopted, and in which it succeeded perfectly. I had a patient in this hospital, under my care, in whom I tried this method of treatment; and in that case also it succeeded, so that at the end of some weeks the fractured bone, which had been ununited for many months, became completely consolidated. The pressure here must be considerable, so as to give the patient a good deal of pain, and put him to considerable inconvenience, but yet not sufficient to do him injury; and if, at the end of a certain time, you find no union effected, still you leave your patient as well as he was before, and he has, at any rate, the satisfaction of knowing that you have done every thing that could be done with propriety for his relief.

The principle of Mr. Amesbury's practice is simply that of keeping the ends of the bones in perfect repose, and at the same time applying pressure, particularly on the broken surfaces, so as to keep them pressed one against the other as exactly as possible. Of course no general rule can be laid down as to the mode of attaining this object. In a case of transverse fracture, one kind of apparatus must be employed, in oblique fracture another, and in comminuted fracture a third. The apparatus will also differ accordingly as it is a fracture of the arm, the fore-arm, the leg, or the thigh; but the principle is the same in all cases. I do not say, however, that this method *always* succeeds; for I know of several cases in which it has failed. There was a patient in this hospital in whom it was tried for a considerable time, under Mr. Amesbury's observation, and no union was effected; and it appears that Mr. Amesbury has met with some cases in his own private practice, in which he has adopted this method of treatment, and no doubt done ample justice to it, but in which it has not succeeded. Still it has proved a very successful method on the whole—more successful than any other.

Plan to be pursued with regard to the present patient.—Now in this patient I shall adopt the plan recommended by Mr. Amesbury; and as there is some union by a soft substance, and as no more than fifteen weeks have elapsed since the accident happened, I think the chances are much in the man's favour. The patient's limb will be bound up in splints, one on each side, and compresses will be applied upon the two broken ends of the bone, so as to press them firmly and steadily against each other. I need not describe the apparatus employed in any more particular manner, as you will have an opportunity of seeing it and examining it for yourselves. No particular constitutional treatment seems to be required. The patient has been of sober and regular habits. He was in good health before he met with the accident, and continues to be so at the present moment.

CLINICAL OBSERVATIONS ON THE LOWER JAW, AND EFFECTING THE CONSOLIDATION OF UNUNITED FRACTURES.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

A pernicious error long prevailed among surgeons with regard to cases of ununited fracture: it consisted in believing that it was absolutely necessary to cut through, or, as it was called, refresh, the two fragments, in order that a solid callus might form. In consequence of this opinion, the operation was not performed where this double section was impossible, or attended with much difficulty.

In this way it was rarely had recourse to in unconsolidated fractures of the femur, or in those in which the fragments *rode*. It is to M. Dupuytren that is due the merit of clearing up this important point in pathology, and demonstrating the fallacy of the opinion alluded to. He thought it would prove sufficient to make a section of one fragment only in order to effect reunion, and he succeeded in two cases in which he tried the experiment.

The first case was that of a female, who had had an ununited fracture of the thigh for eighteen months, and in whom M. Dupuytren having exposed the upper fragment at the outside of the limb, he cut off the extremity, then reduced the fracture, and obtained consolidation in about two months.

The subject of the second was a Russian officer, M. de R. aide-de-camp of Count Woronzoff, who, at the battle of Brienne, in 1814, received a ball which passed from left to right, from beneath upwards, through the neck and lower part of the face. The ball entered on the left, immediately beneath the base of the jaw, at its angle, just before the external carotid artery, and above the os hyoides; and it made its exit to the right, higher up, and before the insertion of the masseter, corresponding so exactly to the jaw that it must have separated the body from the ramus of the bone. The skin, the muscles situated at the side of the neck, the bone at the root of the tongue, had been all traversed, and the lower jaw had suffered a comminuted fracture.

The patient had lost much blood: at first, respiration and deglutition were extremely difficult: after the separation of the eschars, an abundant suppuration took place; and finally, after six months of care and the spontaneous exit and extraction of numerous splinters, the wounds were cicatrized, without the fracture of the jaw being united. Judging from the fragments removed, about an inch of the bone must have been destroyed. Obliged to follow the Russian army on its leaving France, M. de R., cured of the external wound, but not of the fracture, was unable to return to Paris till 1818, when he was in the following state:—

Of the two fragments, the posterior, formed by what remained of the branch of the jaw and a portion of the alveolar ridge, had the shape of an elongated and flattened cone: it had become slightly rotated inwards, so that its superior edge, instead of corresponding to the upper molares, was directed towards the side of the tongue: at the same time a displacement outwards threw the fragment far from the anterior one, towards the thickness of the cheek, where projecting obliquely from above downwards and from within outwards, it supported the wisdom tooth, the crown of which was much inclined, on account of the deviation from the natural position which the jaw had undergone. Before this tooth, a sharp point, beneath which nothing was to be felt, indicated that a portion of the alveolar ridge, about an inch length, had remained continuous with this fragment; but all below, and from it to the angle of the jaw, was destroyed.

The anterior fragment formed by the rest of the jaw had undergone such displacement, that the extremity corresponding to the fracture had been carried to the right, and under the point of the preceding. When the finger was moved from before backwards, along the base of the jaw, till it arrived at the cicatrix, where it rested on the bone at the right side of the face, the projection caused by the point of the anterior fragment was easily perceived, and beyond this the void caused by the loss of substance in the posterior fragment. This portion, judging from the interval which separated its extremity from the second small molaris, was about an inch in length, and was formed by the part of the base of the jaw which had served for the support of the alveoli of the two first large molares, and which had been carried away by the ball, together with the teeth themselves.

Nevertheless, when the parts were examined from within the mouth, the void produced by the loss of these two teeth, and their alveolar process, was scarcely perceptible. The second small molaris of the anterior fragment was almost in contact with the wisdom tooth on the poste-

rior portion, the right half of the lower jaw appearing much shorter than the other, from which resulted a want of adaptation, so that the teeth of the two jaws did not correspond, except at one point; this was at the right lower lateral incisor tooth, which struck against the third incisor in the upper jaw of the same side. In this state of matters the articulation of sounds was extremely difficult, and the mastication of solid food impossible—as much in consequence of want of correspondence between the jaws, as of the weakness and uncertainty of the movements in raising the lower jaw, these being only exercised on one side. To these infirmities various other deformities were added: if the patient ceased to keep up the jaw, by means of a handkerchief passed beneath it over the top of his head, it fell, leaving the mouth open, with a continual dribbling of saliva. Besides this, the chin was turned to the right, so as to distort the face.

M. de R. having in the first instance applied to M. Percy, this gentleman conceived the idea of making a section of the two fragments, with a view of bringing the parts in contact, and procuring their consolidation; and whether with the intention of ascertaining more accurately the situation of the parts, or in the hope of being able to operate more easily upon the posterior fragment, which the elevator muscles kept immobile, and fixed against the upper dental arch, he was induced to remove the last molaris in the upper jaw. Scarcely had this been done when the posterior fragment, having no longer any thing to restrain it, and yielding to the influence of the muscles attached to it, was carried more and more upwards, revolving at the same time on its condyle, until the tooth which it supported came to be lodged in the interval left by the removal of the tooth in the upper jaw. The point of the fragment lodged itself in the thick part of the cheek, opposite the upper alveolar arch, and seemed to be immoveable in this position; the interval between it and the anterior fragment being considerably increased. This circumstance, which it was difficult to have foreseen, rendered the situation of the patient worse than before. And now, in addition to the other difficulties to be overcome, was that of bringing down and retaining the posterior fragment, an object by no means easily accomplished. Such was the state of matters when the patient was handed over to M. Dupuytren.

The first care of the latter was to ascertain the indications afforded by the circumstances; the second related to their fulfilment. The resection of the fragments was the first object, and did not seem to present any difficulty. But this alone was not sufficient; and it was obvious that the greater the loss of substance to which they had been subject, the greater would be the difficulty in approximating them. Convinced by numerous observations that it was sufficient in analogous cases to make a section of only one of the fragments to procure consolidation, he resolved to do so with respect to the posterior fragment only, and to content himself with scraping the other*. But, as has already been said, the loss of substance suffered by the posterior fragment involved the portion of it which corresponded to the base of the jaw; while, on the contrary, that of the anterior fragment involved the alveolar process: whence it resulted, that if both were brought back to their proper places, they could never be brought into immediate contact, because there would always have been between their points of termination the natural interval which separates the basis of the jaw from the alveolar ridge.

This consideration did not deter M. Dupuytren, who had seen, after many amputations of the middle portion of the jaw, a production of bone extend from one branch to the other, and make up so exactly the body of the bone which had been removed, that the patients, when examined from without, did not seem to have lost the projection of the chin. But what was more difficult was, that in order to prevent deformity, it was requisite that the two fragments should be got into their proper places, and kept there; that is to say, that the posterior one should be carried downwards, and to the left, while the anterior was to be raised, and brought to the straight line. M. Dupuytren was anxious, therefore, to try how this might be done, before he proceeded to an operation. The first expedients tried and persevered in for a month, were unavailing. M. Lemaire, a distinguished dentist, then invented a very simple and ingenious contrivance. It consisted, first, in replacing the upper molar tooth (which had been removed) by one of ivory, which should oppose itself, as the natural one had done, to the dragging of the posterior fragment upwards; and, secondly, in replacing and maintaining the two fragments in a proper position by means of platinum wires attached on the one hand to the teeth remaining in the portion of the jaw next to the fracture, and fixed on the other to the teeth in the corresponding part of the upper jaw. A trial of these having first been made, and M. Du-

* The French word is *ruginer*: it is applied almost exclusively to cleansing the teeth, and implies their being rubbed with a steel instrument.—*Transl.*

puytren, well convinced that the operation had nothing dangerous in it, and that even if unsuccessful it could not add to the mischief, proceeded in the manner which follows:—M. de R. being placed in a chair, the operator laid hold of the right cheek, between his thumb, which was applied to the skin, and the fore finger of the right hand introduced into the mouth; and then with a bistoury held in the left hand, he divided the parts from without inwards, perpendicularly from the axis of the jaw, about three lines behind the summit of the projecting point formed by the posterior fragment: the incision having been continued to the bone, and the fleshy parts which covered this, both before and outwards, having been divided in a circular manner, he substituted a saw with a very narrow blade, with which he effected the removal of a portion of bone of triangular shape, the smooth cicatrized extremity of which adhered to the soft parts of the cheek. The fragment itself which remained was about three inches long. The portion which had been separated was removed from the inside of the cheek and mouth. M. Dupuytren then applied to the anterior fragment, which he wished simply to denude, an instrument used by engravers on wood, and which he employed after their fashion; that is to say, the handle of this kind of gouge rested against the palm of the hand, being retained there by three of the fingers, while the thumb and fore-finger were extended upon the blade. The fore-finger of the left hand acted as a director and *point d'appui* on the oblique border of the fragment. All this border was denuded of its soft fibro-cartilaginous parts. M. Dupuytren, however, had the precaution to preserve the inner portion of the gum, the situation of which formed a kind of barrier, which prevented the saliva from penetrating between the ends of the fragments. The operation was attended with but moderate pain, and the loss of blood did not exceed a few spoonsful.

The next point was to fasten the fragments. M. Lemaire began by placing in the situation of the last molar of the upper jaw a strong piece of hippopotamus tooth, the upper surface of which was applied to the gum, and the lower surface of which presented a cavity to receive the wisdom tooth of the lower jaw. This was fixed by a platinum wire in such manner as to form a substitute for the tooth which had been removed, as above mentioned, and so as to keep down the posterior fragment which had become tilted up into the thick part of the cheek: and this was the first indication after the completion of the section of the bone.

A noose of wire of the same metal was next twisted round the crown of the wisdom tooth of the posterior fragment: the wires were then carried above the tongue, and passed through the gum on either side of the small inferior molaris on the left side, in which situation they were united and fastened. This wire was intended to carry the posterior fragment upwards, and to keep it on the same line as the other. In this manner the posterior fragment was brought down and fixed to the anterior, the movements of which it was henceforward to follow, and thus two mutual indications were fulfilled.

Lastly, it was necessary to fix—to render them more secure—the two reunited fragments of the lower jaw to the upper jaw: with this view another noose of platinum wire was passed round the small molaris of the lower jaw on the right side, and attached to the corresponding tooth in the upper jaw on the left side. This proved by far the most difficult part of the proceeding: the wires broke; the muscles became irritated, and acted violently; and it required two hours' patient labour to effect the purpose.

At length the patient, now much fatigued, was replaced in bed, and ordered to observe absolute silence, his wishes being expressed in writing.

His first night was tolerably quiet; but some evils soon shewed themselves. The pressure exerted by the false tooth on the upper gum, and by the platinum wires upon the tongue, produced excessive pain in those parts; the patient even expressing his apprehension that his tongue was cut through: on the other hand, the wires attached to the teeth of the upper jaw communicating to them the efforts made by the fragments to become disunited, occasioned pain over the whole of the alveolar arch, which recurred at intervals, was so frequently repeated as to prevent the patient from sleeping, and so acute as to draw tears. On the eighth day, some pus was mingled with the mucus which flowed from the mouth. The parts were washed out by means of injections several times a day—a proceeding which proved exceedingly agreeable to the patient, and which was continued throughout. It was not till the 28th day that the bandages were removed; the external wound was then almost cicatrized, and the suppuration in the mouth, which had never been very abundant, was diminishing. On the 32d day, the wound externally was entirely healed. On the 61st day, the bandages were removed, in order to examine the state of the parts. On running the finger along the base of the jaw, it was ascertained that a new production had been been formed, firm, resistent, and extending from below upwards, and from before

backwards, from the anterior to the posterior fragment. This state of things was as satisfactory as possible, but the removal of the apparatus was postponed for two days more. On the 63d day, the nooses of wire, which fixed the two dental arches, were removed. Some slight movements of elevation and depression were performed, when it was perceived that the jaw became a little inclined to the right in descending, but recovered its proper position on being raised; so that when the movements were repeated, the patient was seen to masticate exactly in the manner of an herbivorous animal. On the 68th day, the thread which traversed the mouth was removed. The fears which the gentleman had expressed at the commencement, were now perceived to have been well founded. The two portions of wire composing the noose which extended across the mouth from the right wisdom tooth of the lower jaw to the first molaris of the left side, had cut their way into the substance of the tongue, through more than half its thickness; but as the layer, first divided, had progressively healed as the wires penetrated more deeply, these were found passing right through the tongue, like the pins in hare-lip: they were cut across and removed. The patient was now allowed to speak, after sixty-eight days of such absolute silence that not only was he not permitted to utter a word, but not even to attempt a sound. On the 83d day the false tooth was removed, which had hitherto been left by way of precaution. By the 90th day the jaw evidently became less drawn to the right side in being lowered, and had regained much of its symmetry; so that when M. de R. quitted Paris, the chin occupied the median line, the teeth of the lower jaw being situated behind those of the upper, by about the thickness of one of the incisors. The patient could articulate distinctly, and was able to masticate solid food.

Several letters have been received by M. Dupuytren from him, as well as General Woronzoff, since his return to Russia, which confirm the solidity of the cure.

CARCINOMA OF THE CLITORIS*.

A POOR woman, about forty-five years of age, having that peculiar expression of countenance, and leaden complexion, which so frequently indicate the existence of malignant disease, applied for admission into the Infirmary, in February, 1827. The clitoris was about the size of the fist; had a hard, irregular feel; was the seat of lancinating pains; and, towards its apex, it contained several deep ulcerated excavations, having thickened and everted edges, from which a thin sanious discharge issued, and produced painful excoriations. The disease, which had existed for eleven years, and was attributed to a kick she received from her husband, produced no pain till about eight months ago, a short time before it ulcerated, when her health became affected. She had a discharge from the vagina, with pains in the back and loins; and, on examination, the os uteri was found indurated, painful, and apparently ulcerated.

In this case, the clitoris was evidently carcinomatous, as was also the os uteri. She was therefore dissuaded from any operation, returned home, and died in four months after. I was permitted to inspect the body, and to remove the diseased parts. The structure of both the clitoris and os uteri was decidedly carcinomatous: there were also diseased glands, some of which presented the same morbid structure in the groins and in the pelvis. The disease had extended along the crura of the clitoris to their origin, from the ischii and pubes.

* From Dr. Macfarlane's Clinical Reports.

COMPLETE EXTIRPATION OF THE CLAVICLE.

A CASE of this rare operation is detailed in the *Journal der Chirurgie und Augenheilkunde.* A man, aged 31, of feeble constitution, was seized, in June 1822, with violent pain in the right arm, simulating rheumatism, for which it was treated, but without avail. In October, 1832, he came to the hospital at Zurich. He was then much emaciated, and labouring under hectic, with an unhealthy ulcer at the acromial end of the clavicle, which was partially denuded. More close examination shewed the bone to be carious throughout. Various remedies were employed, both generally and locally, without avail; and it was then determined to extirpate the part. The arm was carried forward as far as possible, with a view of removing the clavicle to the greatest distance from the vessels beneath it; an incision was then made along the lower edge of the bone, and its connexion with the parts beneath separated, partly with the fingers and partly with the knife. The capsule of the sternal end was next opened, but in pulling the bone, to disengage it, it broke near the articular extremity. The fractured portion was easily removed, and the fragment at the sternal articulation also brought away without difficulty. The operation was completed in five minutes, and no vessel of importance was opened. The patient did well, being able to perform all movements of the arm forwards,

backwards, and upwards. He continued his usual avocations till 1828, when he died of phthisis.

COSTUME OF THE ACADEMY OF MEDICINE.

The King of the French has evidently a strong leaning towards the arrangements of the old times of legitimacy; he has just ordered, through his Minister of Public Instruction, that the Academicians of the Faculty shall in future wear a sort of Court dress at their sittings. Their uniform is to be a black coat, with violet-coloured embroidery for the facings and collar, a sword with gold mounting, and a cocked hat.

THE CAUSE OF CHOLERA DISCOVERED.

A gentleman just arrived from India has made the important discovery, that cholera is produced by *eating rice*. This at once accounts, in a convincing and satisfactory manner, for the *rice-water* evacuations by which the disease is characterized. We were not aware that the Russians, Germans, French, English, Americans, and, in fact, all the inhabitants of the world, lived on rice; but we grow wiser as we grow older. The rice-water dejections being every where found, is conclusive.

MEETING OF STUDENTS AT ST. BARTHOLOMEW'S.

A meeting of the senior students of St. Bartholomew's Hospital was held in the anatomical theatre of that institution, on Friday the 4th instant, for the purpose of taking into consideration the propriety of presenting Mr. Skey, their late demonstrator, with some mark of their respect. Mr. J. Sladden, in the chair.

The Chairman briefly explained, that the objects of the meeting were not to consider *why* Mr. Skey no longer held the office of demonstrator, but to express their regret at his secession, and to present him some tribute of respect for his indefatigable exertions to promote the interests of the school, while connected with the anatomical department of St. Bartholomew's.

Resolution 1, Proposed by Mr. Knight, seconded by Mr. Hitchcock, and carried unanimously,—That this meeting views with regret the absence of Mr. Skey from the anatomical department of this school.

Resolution 2, Proposed by Mr. Furley, seconded by Mr. Hunter, and carried unanimously,—That a snuff-box, and a vote of thanks, be presented to Mr. Skey, as a token of admiration, and a mark of respect.

Resolution 3, Proposed by Mr. Miller, seconded by Mr. Ponter, and carried unanimously,—That a committee of five students (who from themselves shall elect a treasurer), be appointed to receive subscriptions, and to carry into effect the foregoing resolutions.

The following gentlemen were then severally proposed and seconded, and unanimously elected members of the committee:—Messrs. Knight, Sladden, Rockett, Furley, and Hunter.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Oct.* 8, 1833.

Age and Debility	37	Heart, diseased	4
Apoplexy	10	Hernia	1
Asthma	11	Hooping-Cough	8
Childbirth	3	Inflammation	27
Cholera	8	Bowels & Stomach	7
Consumption	63	Brain	4
Constipation of the Bowels	1	Lungs and Pleura	2
Convulsions	27	Insanity	1
Croup	1	Jaundice	2
Dentition or Teething	1	Liver, diseased	8
Diarrhœa	1	Measles	11
Dropsy	10	Mortification	4
Dropsy on the Brain	7	Paralysis	3
Dropsy on the Chest	1	Small-Pox	6
Erysipelas	1	Sore Throat and Quinsey	4
Fever	4	Thrush	5
Fever, Scarlet	9		
Fever, Typhus	3		
Hæmorrhage	1	Stillborn	9

Decrease of Burials, as compared with the preceding week . . . 140

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Oct. 1833	Thermometer.	Barometer.
Thursday . 3	from 35 to 60	30·01 Stat.
Friday . . 4	35 61	30 03 to 30·06
Saturday . 5	37 59	30 07 30 04
Sunday . . 6	36 60	30 02 30·05
Monday . . 7	34 60	30·04 30.01
Tuesday . . 8	39 59	29·96 Stat.
Wednesday 9	37 58	30·05 30·12

Wind N. and N. E.

Generally clear; overcast at times with dense clouds.

Charles Henry Adams.

BOOKS RECEIVED FOR REVIEW.

Observations on the Injurious Tendency of Extreme Depletion in Inflammatory Disorders; &c. By E. Daniell, Surgeon.

Observations on Obstetric Auscultation, with an Analysis of the Organs of Pregnancy, &c. By Evory Kennedy, M.D. &c.

Illustrations of the Effects of Poisons. By George Leith Roupell, M.D. The Plates from Original Drawings by Andrew Melville M'Whinnie, M.R.C.S.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 19, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

THE PELVIS.

Although, gentlemen, it is incumbent on every practitioner in obstetric medicine and surgery fully to inform himself of the anatomy of all parts of the human body, still there are some organs which more particularly demand his attention, as they are intimately connected with the processes of conception and utero-gestation, and exert a most powerful influence during the mechanical act of parturition. We shall confine our anatomical demonstrations, therefore—as it is most natural we should—to those organs particularly connected with our department of the profession; and the pelvis will first engage our observation.

I trust you recollect that, at our last meeting, I called your attention to an irregular hollow mass of bones placed at the bottom of the spine, resting upon the lower limbs, connecting the trunk with the inferior extremities, and supporting the spinal column, and through its means the cavities of the chest and abdomen, the superior extremities, and the head.

Etymology.—In shape this organ somewhat resembles a basin, from which circumstance it has obtained its designation; for the Greeks called it πελυς, a word which signified one of their common domestic utensils. The Latins from them derived the name of *pelvis*, which is the term we still employ. In many of the old works, indeed, both upon anatomy and obstetrical medicine, we shall find that it is called by the familiar term *basin*.

May be compared to a hollow cylinder.—The pelvis in its dry state, divested of its softer structures, has the appearance of considerable irregularity; but when its muscles, ligaments, its contents, and their connecting cellular structure, are preserved, it may with truth be likened to a hollow cylinder, in whose cavity, besides many other important parts, lie three tubes, the *urethra* anteriorly, the *vagina* in the centre, and the *rectum* posteriorly.

Division of the bones of the pelvis.—The pelvis, in the adult body, is divided into four bones: two *ossa innominata*, which form the parietes of this organ at the side and in the front; the *sacrum* and the *os cocygis*, which form the boundary behind. In the young subject, however, many points of ossification are observed, which are separated from each other by intervening cartilage. In process of time, during the growth of the body, these cartilaginous septa are absorbed, osseous matter is deposited in their stead, and thus a number of distinct bones become consolidated into one piece.

Os innominatum.—This arrangement is particularly remarkable in the ossa innominata: I hold in my hand the os innominatum of the right side, and I place it in the situation which it occupies in the upright position of the body. In the early period of existence, then, the os innominatum is divided by pieces of intervening cartilage into three distinct bones: the *os ilium* occupying the upper, the *os ischium* the lower, and *os pubis* the fore part; as you may observe in all these preparations procured from the young subject. It was in consequence of the irregularity in the shape of this bone—its not being capable of being likened to any thing in nature—that it has acquired that singular term, which is in itself a contradiction, the *os innominatum*. For the purposes of description and demonstration, anatomists continue to consider this bone as being still formed of the three pieces of which it originally consisted; and in describing it we

shall follow the common course adopted by anatomists.

Os ilium.—First, then, of the *os ilium*, which in common language is designated the *haunch* or *hip* bone. It is the largest of the three divisions of the os innominatum; it occupies the upper part of the side of the pelvis; it is remarkable for a base or body, which is the lowest and thickest portion of the bone, and a spreading wing or ala, rising obliquely upwards, outwards, backwards, and forwards, for the purpose of supporting the bowels, and giving attachment to some of the abdominal muscles. The general appearance of this bone is rough externally, and smooth within; and this peculiarity is much more remarkable in the male than in the female, in the old than in the young subject. The irregularities on the external surface are produced by the action of very strong muscular fibres, which take their origin from this bone; the smoothness of the internal surface is for another object, which we shall by and by, in the course of our observations, ascertain.

We designate the external surface of this bone the *dorsum*, and the internal the *venter*. Just above the base, or body, we observe a slight groove, which is considered to be the neck of the bone; and above it we find the ala, projecting as I have just described. This ala terminates in a ridge, to which we give the name *crista ilii*,—the *crest* or *spine* of the ilium. In the recent state this is tipped with cartilage, and it gives insertion to the oblique and transverse abdominal muscles. The crest of the ilium terminates in a projecting point anteriorly, and another projecting point posteriorly; and to these points we give the name of *spinous processes*—the anterior and posterior superior spinous processes; and I shall presently describe two others. Just below the *anterior superior spinous process* there is a sinuosity, and then another jutting piece of bone—the *anterior inferior spinous process.* Behind we have a somewhat similar depression, below the *superior spinous process;* and again another projecting angle of bone below that, which has obtained the name of *posterior inferior spinous process.* To the two anterior spinous processes muscles are attached, and to the two posterior, strong ligaments, which bind this bone to the sacrum, at the back of the pelvis. The anterior superior spinous process gives attachment to one end of Poupart's ligament, and origin to the tensor vaginæ femoris, and sartorius muscles. From the anterior inferior spinous process the rectus femoris arises. Below the posterior inferior spinous process, there is a considerable arch, forming, in conjunction with the sacrum, a very large sinuosity or notch, which is called the *sciatic notch;* but in the recent pelvis it is perfected into two foramina, by ligaments which run from the front to the back part of the pelvis; and therefore, when the ligaments are preserved, these apertures are called the *sciatic foramina;*—through the larger pass the gluteal, sciatic, and pudic arteries; the sciatic and pudic nerves; and the pyriform muscle;—through the smaller, the pudic artery and nerve re-enter the pelvis, and the obturator muscle passes out.

Now the venter of the bone is smooth, and the principal part of the inside of it (this fossa which you observe) forms a bed for the lodgment of the internal iliac muscle; but the posterior portion of the inner face of the bone is very rough, has even a rougher surface than the external part. This irregular space marks the connexion of the ilium with the sacrum, which union forms one of the two sacro-iliac symphyses, or posterior joints of the pelvis. We observe also a ridge running horizontally through the bone, dividing the ala from the lower part, more evident in the entire pelvis, a portion of the *pelvic brim*, or *linea-ileo-pectinea*, to which I shall have frequent occasion to direct your attention during the following observations.

The thick part of the bone, which I have denominated the base or body, forms a considerable portion of the cavity for the reception of the head of the thigh bone, which anatomists have termed the *acetabulum.* The connexions of this bone then, are, to the ischium, and the pubis in the acetabulum, and to the sacrum behind, by means of the sacro-iliac symphysis.

Os ischium.—Then the second division of the os innominatum is called the *os ischium.* It is second in size, and lowest in position. Familiarly we call it the *seat* bone, because it is that on which we rest when in a sitting posture. It is also remarkable for some points which I shall mention: a *base*, or *body*, a *spinous process*, a *tuberosity*, and *ascending ramus.* The base, or body, is the thickest part of the bone, and, like the base of the ilium, it enters considerably into the formation of the acetabulum. Just below the base we have a narrow portion, which we call the *neck;* and below that again, jutting backwards, and looking rather inwards, we observe an evident projection of bone, in shape somewhat like the point of a lancet, which we call *the spinous process of the ischium*, giving attachment to a ligament presently to be described, and origin to the *coccygeus* muscle. This spinous process, we shall find hereafter, is an object of more intense interest to the obstetrician, than its comparatively small size would lead us to suppose, because it occasionally bends too close inwards, and by such a formation encroaches materially on the due capacity of the outlet, and in a

greater or less degree retards the passage of the child's head in labour. Tracing the bone downwards from the neck and spinous process, we have a very considerable bulging protuberance, which we call the *tuber ischii*, or *tuberosity of the ischium;* and rising forward obliquely and upwards from the tuberosity, we observe a flattened narrow piece of bone, which is called the *ramus of the ischium.* This bone also is very rough on its external surface, and smooth within; and the irregularity indicates the attachment of very strong muscles, principally the extensors of the thigh, the semimembranosus, the semi-tendinosus, and the long head of the biceps.

The ischium is connected with the ileum and pubis at the acetabulum; it is connected also with the sacrum behind, not by direct junction, or by an union of bone, but through the intervention of the sacro-ischiatic ligaments, one set of the fibres of which runs from the spinous process of the ischium horizontally backwards, to be distributed on the lower part of the sacrum, and the upper part of the coccyx; and the other, ascending obliquely backwards from the lowest point of the tuberosity of the ischium, crosses the fasciculus just spoken of, and is spread out on the lower and middle portion of the sacrum.

Os pubis.—The third of these divisions of the innominatum is the *os pubis, os pecten*, or, in common language, the *share* bone. It is the anterior and smallest of the three pieces. Like the other two bones, it is remarkable for a base or body, which also forms a portion of the acetabulum—for a *horizontal ramus*—for what we call the *symphysis*—for a *spinous process*—and for a *descending ramus.* Just anterior to the base, or body, we have a contracted portion, which may be called the *neck;* and running horizontally forwards and inwards, so as to meet its fellow of the opposite side, there is a narrow sheet of bone, the *horizontal ramus* of the pubis.

In the inner side of this ramus, we observe a continuance of the same line which was remarkable in the ileum, and which forms a portion of the brim of the pelvis; and on the extremity of this line, as it were, we perceive a small prominence, or promontory, of bone, to which we give the name of *spinous process of the pubis.* One end of Poupart's ligament is attached to this. We have also a portion of the rectus abdominis and the pyramidalis muscles attached at the extremity of the ramus. Then we have a flattened sheet of bone, and the edge of it we call the *symphysis of the pubis;* and this is the anterior joint of the pelvis, by which the bone is attached to its fellow on the opposite side. When I say that the bone is attached to its fellow, that is probably not a correct way of speaking, because there is a considerable thickness of cartilage interposed between them. This symphysis has been described as possessing a perfect joint. I have never been able to detect a complete joint here; but there is a considerable thickness of cartilage, and in some instances a slight motion, perhaps, might be allowed, even in the healthy state of the parts; but of that I am not quite certain. Descending, then, downwards, and obliquely outwards, from the lower part of the symphysis pubis, we have the descending ramus of the pubis running down to meet the same sort of bony sheet ascending from the ischium, so that the two rami meet by a consolidation of osseous matter. This bone, like the others, is rough externally, and smooth within. Externally the adductor muscles of the thigh are attached to it.

When we look to this entire bone again, the os innominatum, there is another point which cannot but arrest our attention immediately, and that is the large oval foramen in the anterior part, formed by the ischium and pubis. This is called the thyroid foramen. In the recent pelvis, it is covered by a ligament; that is to say, an extension of the fibres of the periosteum, both externally and internally, which crosses over this thyroid foramen, and which has obtained the name of *obturator ligament.* Sometimes this is called the *obturator foramen.* This foramen is completely filled up by the ligament, except at the upper part, where the artery, nerve, and vein, pass out. The object of this ligament is to act the part of bone, and the foramen was probably formed with the view of lightening the weight of the pelvis; for we observe that part of the ligamentous fibres actually give origin to the adductor muscles of the thigh, in the same way that the external surface of the bone does. It answers, therefore, entirely the purpose of bone, and tends to lighten the general weight of this part of the body.

Relation borne by the os innominatum to the brim, cavity, and outlet of the pelvis.—There is still another circumstance with regard to these three bones, to which I would beg particularly to direct your observation;—I mean the reference which they each bear to those different parts of the pelvis that we shall hereafter describe—the *brim*, the *cavity*, and the *outlet.* The os ilium forms a considerable portion of the brim, but none of the outlet; the os ischium a considerable part of the outlet, but none of the brim; the os pubis enters very largely into the formation both of brim and outlet, so that when the os pubis is deformed, we have both the inlet and the outlet of the pelvis suffering materially in their dimensions. I may remark, also, that with re-

gard to the acetabulum, about two-fifths may be said to be formed by the ilium, about two-fifths by the ischium, and by the os pubis one-fifth. This last is, perhaps, more an anatomical than obstetrical observation; but at the same time it is worthy of notice, and of course worthy of being recorded in your minds.

Os sacrum.—The back part of the pelvis is formed by the *sacrum* and *os coccygis.* The name *sacrum* was given to this bone in consequence of its being that part of the body which, in the sacrifices of the ancients, was laid up and preserved in the temples of the gods. It is of a very spongy texture, and perhaps for its size the lightest bone in the body. It has also been named the false vertebra, in consequence of its being considered as an extension or elongation of the vertebral column. In shape it is triangular, the base of the triangle being upwards, and the apex downwards. I hold it now in its natural situation, when the body is in an upright position. It has four surfaces—an external, an internal, and two lateral surfaces. The external surface is very rough, irregular, and convex; and there are a number of processes observable here, which are assimilated to the spinous processes of the vertebræ. They appear, indeed, to be imperfect continuations, as though the peculiarities of the vertebræ were dwindling away by degrees, as they approached the lower part of the body. Anterior to this series of projections, which we may call spinous processes, there is a hollow canal, in capacity more than sufficient for the reception of a female catheter. This is for the lodgment of the chorda equina, the lower end of the spinal marrow: we observe externally four pairs of holes, which are for the transmission of the nerves from the chorda equina to the parts external to the pelvis, so that these structures get a direct nervous supply from a very immediate source. Internally, the sacrum is smooth, exactly resembling in this respect the other bones of the pelvis, and concave. It appears, especially in the young subject, to be divided into five pieces by four horizontal white lines. These lines shew the situation where the cartilage was placed in the early period of existence; when, indeed, the bone consisted of five distinct portions; but in after life, as was remarked with regard to the os innominatum, the cartilage becomes absorbed, bone is deposited in its place, and eventually one solid piece is formed out of many. There are also four pairs of holes within, one at the extremity of each white line, for the transmission of nervous filaments, to form a part of the great sacro-sciatic nerve, as well as to supply the organs contained within the pelvis. The two lateral surfaces are irregular, and correspond in extent and irregularity with that part of the os ilium which I told you formed the sacro-iliac symphysis. Here, as is the case at the symphysis pubis, there is a considerable deposit of cartilaginous matter. It is not exactly such cartilage as occurs at the ends of the long bones, but is more like the inter-vertebral substance, though not so thick. This soft elastic pad is evidently to protect the body from shocks, in sudden and violent motions, such as running and jumping. It is remarked by anatomists, that this inter-osseous cartilage has a greater affinity to the sacrum than to the ilium, since in separating the bones it always adheres to the former. The concave surface of the bone is called the *hollow of the sacrum.*

Then there is another portion of this bone which I always take the liberty of reserving to the last—the prominent ridge at the upper part, about which I shall hereafter have a great deal to say under the name of the *promontory* or *prominence* of the sacrum. This ridge is formed by the upper edge of the centre of the os sacrum, in conjunction with the lower lumbar vertebra. It is upon this that the weight of the upper part of the body particularly rests; and it is this part of the bone which is generally deformed, when the brim of the pelvis is the subject of distortion. It is deformed by being thrown too far forwards, jutting too much inwards over the cavity, reducing in size, therefore, more or less, the entrance to the pelvis.

This bone is connected with the lower lumbar vertebra, which rests immediately upon it, with the intervention of cartilaginous matter between. It is connected at the sides with the ilium,—there is certainly no true joint here, nor synovial apparatus;—with the os coccygis below, by a movable joint; and also with the ischium, by the two fasciculi of ligamentous fibres mentioned before, one of which passes to the spinous process, and the other to the bottom of the tuberosity of the ischium.

Os coccygis.—Lastly, we have to describe the coccyx—an appurtenance, as it were, attached to the inferior extremity of the sacrum, but of considerable consequence in the practice of midwifery. The name of *coccyx* was given to this bone in consequence of its resemblance to the beak of a cuckoo, one of the hawk tribe. It is, therefore, as the name would imply, somewhat triangular in its shape, the basis being placed upwards, the apex below. When we call this bone the os coccygis, you must understand that is divided into a number of pieces by separate joints, generally into three, so that there is the upper, the middle, and the lower joint of the

os coccygis. It is convex externally, and irregular, like a continuance of the sacrum; and concave and smooth within: terminating pretty much in a point. The bone I show you is that belonging to an adult pelvis.

Now we find that the joints placed in the os coccygis are of immense value in labour: their mobility facilitates the exit of the fœtus, by enabling the outlet of the pelvis to be enlarged. We find, that when the child's head presses upon the os coccygis, in emerging from the pelvis, the joints allow it to be bent back in a line continuous with the sacrum, or even sometimes beyond. In the natural state of the parts, the point projects with an angle inward. The joint of this bone in the male also bends somewhat backward during the evacuation of the rectum, but not near so much as in the female under the parturient process.

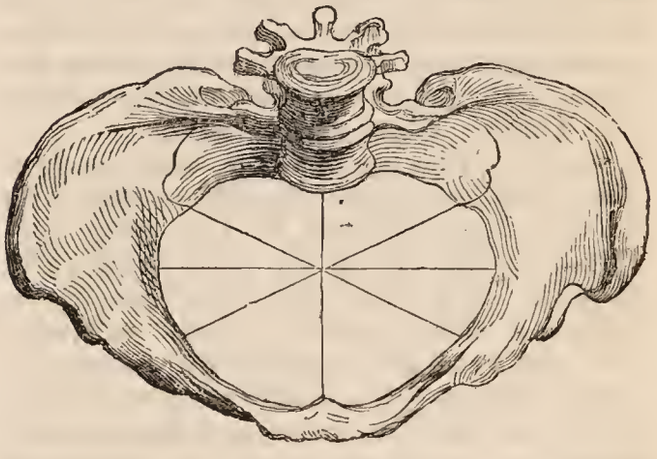
Anchylosis of the os coccygis to the sacrum.—We sometimes observe that the coccyx becomes anchylosed to the sacrum, and that its own joints are also destroyed by the deposition of osseous matter between its separate pieces, so that the mobility of the bone is lost, and it becomes then a continuation, as it were, of the sacrum. Now it cannot but immediately strike you, that should this consolidation have happened before or under pregnancy, it must offer during labour an impediment to the child's head outwards; and so, indeed, it does. This anchylosis is most usually met with in persons beyond the middle age.

Fracture of the os coccygis.—Occasionally the os coccygis breaks under the action of labour. I have known three cases of this description, in which I heard it snap—two under the employment of the forceps, and one during the powerful contraction of the uterus, unaided by mechanical means. In neither of these three instances did permanent injury ensue; there was a little pain and inconvenience at the time, but it was trifling. Should an accident of this kind happen to you in practice, you need not blame yourselves under the idea that the fault was your own. It is impossible to prevent its occurrence; especially if it does not take place under the use of instrumental means. I would advise you, on such an occasion, to keep your patient perfectly still, to interdict her lying on her back, and to prevent anything pressing the tip of the coccyx forward: your object should be to produce ossification and union between the two bones, with the point of the coccyx thrown as much back, in a continuous line with the sacrum, as possible; because, if this bone become attached to the sacrum at a considerable angle, with the point inwards, it will in the next labour, provided the woman becomes afterwards pregnant, again offer a proportionate impediment to the passage of the child's head. You should keep in mind that it is desirable not only to obtain an union of the parts, but that the point of the os coccygis should look as much backwards as can be. This bone has been called the *huckle* bone, and sometimes the name of *whistle* bone has been given to it. I suspect that huckle is a corruption of knuckle; but that is not very clear.

Form and dimensions of the pelvis.—These bones, then, in connexion, form the pelvis; which I shall next describe, particularly in reference to labour, and will now proceed to examine its dimensions and figure.

The pelvis is divided obstetrically into three parts—the *brim*, the *cavity*, and the *outlet:* the brim being superior, the outlet inferior, and the cavity the part which is contained between these two. Anatomists demonstrate the pelvis as being formed of two portions—the one true, the other false. They call that the *false pelvis* above the brim—the *alæ ilii*—and that below the brim the *true pelvis.* Obstetrically, we have to do with nothing but the true pelvis—the brim and the parts below it.

Brim of the pelvis.—In proceeding to the consideration of the different parts of the pelvis, I shall demonstrate it to you, not in reference to any one of the pelves on the table, but in accordance with a fancied symmetrical organ which obstetricians are in the habit of assuming as the standard pelvis; and first, then, let us look to the figure and dimensions of the *brim.* When we glance at the brim of the



pelvis—when we just cast our eye along it—we observe that it possesses two diameters, a long and a short one, and is to a certain extent oval. This is particularly the case with regard to the female pelvis, where the long diameter is from side to side. We observe that the regularity of the oval, however, is broken by the jutting forward of the promonitory of the sacrum, so that the outline gives somewhat the figure of the ace of hearts, as represented on playing cards; but this resemblance is more remarkable in the male than the fe-

male, because the long diameter in the male is from the anterior to the posterior part; whereas, in the female it is from side to side. It is equally necessary to become acquainted with the *dimensions* of the brim as with its figure: these are five inches from side to side, and four inches, or a trifle more, from the back to the fore part—from the promonitory of the sacrum to the upper part of the symphysis pubis, in what is called the conjugate diameter.

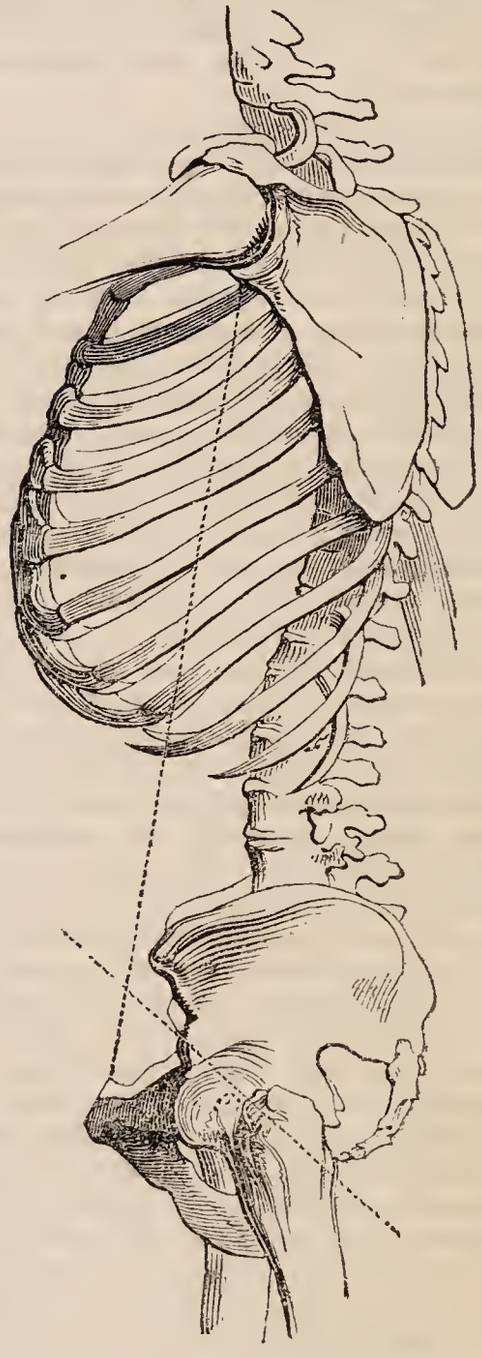
There has been a great deal of dispute among anatomists and obstetricians, which, in a well-formed pelvis, is the longest diameter—whether direct from ilium to ilium, or diagonally from the sacro-iliac symphysis on the one side, to the groin on the other. Some tell us that the direct diameter is the longest, and others that the oblique lateral diameter is the greatest in extent. It surely is scarcely worth while to enter into this controversy, but I think, in most well-formed pelves, we shall find that, denuded of soft parts, the oblique diameter is the longest, probably by an eighth of an inch, or more; but when the soft parts are preserved, then the greatest space is along the direct diameter.

Cavity.—Next let us examine the cavity. With regard to its shape, we observe that it is deep behind, shallow in front, and becomes shallower as we approach from the back to the fore part. Behind, then, from the promontory of the sacrum down to the point of the coccyx, a finely-formed pelvis should be five inches and a half, or six inches, in depth; in the front, at the symphysis pubis, which is shallow, it should be from an inch and a quarter to an inch and a half; and at the side, from the lowest point of the tuber ischii up to the brim, it should measure about three inches and a half. These are its depths.

Outlet.—The outlet has also an oval shape, but it is not so regular an oval even as the brim, because of the projection formed by the tip of the os coccygis, and because of a large sinuosity anteriorly, which I shall presently speak of under the name of the arch of the pubis. I have said that the outlet of the pelvis is oval, like the brim; but, as I remarked to you at our first meeting, the proportions of these apertures are reversed. The long diameter at the outlet is antero-posteriorly from the inferior edge of the symphysis pubis to the os coccygis; and when the tip of this latter bone is turned back, as in labour, it measures five inches or more, while the shorter diameter is from side to side, from the tuberosity of the one ischium to that of the other, and is about four inches; so that in extent the diameters are nearly the same as at the brim, but in situation they are reversed—the long diameter of the brim being from side to side, the long diameter of the outlet being from the fore part to the back.

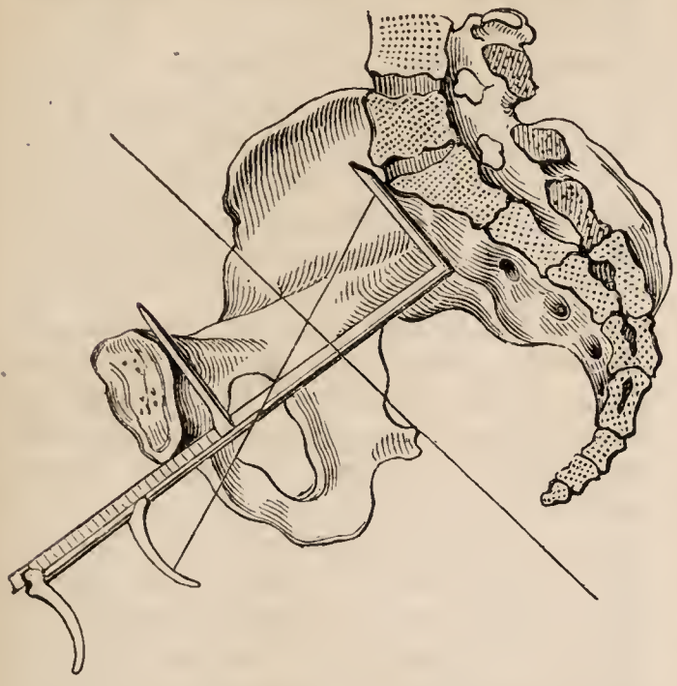
The outlet, then, is formed by the os-coccygis, by the inferior edge of the sacro-sciatic ligament, by the tuberosity of the ischium, and by this large sinuosity in the anterior part of the pelvis, which is called the arch of the pubis; bounded above by the lowest point of the symphysis pubis, laterally by the descending ramus of the pubis and ascending ramus of the ischium, and at the base by the tuberosities of the ischium.

Position of the pelvis with reference to the trunk.—The position of this organ, the pelvis, in regard to the trunk of the body, is neither perpendicular nor horizontal, but oblique; and we have also to



remark more particularly, that the axes of the entrance and of the outlet of the pelvic cavity are also in different directions; so that a line passed along the axis of the entrance would cross, at an acute angle, another line carried through the axis of

the outlet. We shall hereafter shew how this configuration of the pelvis influences the act of parturition.



[Coutouli's pelvimeter has been introduced into this cut by mistake of the engraver, but it does not interfere with the lines shewing the axes of the two apertures.]

Ligaments of the pelvis.—We have already spoken of three joints appertaining to the pelvis, independent of those of the coccyx—an anterior one, the symphysis pubis, and a posterior one at each side the sacro-iliac symphysis; and these joints are bound together by exceedingly strong ligaments. It is observed that the ligaments outside are very thick, that those on the inside are much thinner, although both are strong; and this is a wise provision of nature, because the thicker the ligament within, the greater space would it occupy, and the more would it impede the passage of the child's head downward in labour.

Besides these, there are anteriorly the two obturator ligaments filling up the thyroid foramina, and, as I said before, extensions of the periosteum, which act as bone: and we have also posteriorly the *sacro-ischiatic* or *sacro-sciatic* ligaments, arranged in two fasciculi—the one running *obliquely* upwards and backwards from the lower end of the tuber ischii, to be distributed along the side of the sacrum; the other running *horizontally* backwards, from the spinous process of the ischium to the lower part of the sacrum and the upper part of the os coccygis, tending much to strengthen the union of the sacrum with the other bones of the pelvis—tending also to prevent fractures, and giving firmness to the whole body.

Separation of the bones under parturition.—Now I believe myself that the bones of the pelvis, under natural labour, never separate—that the separation of these bones, in every instance in which it takes place, is the consequence of a diseased action. It was the old opinion, that the ligaments connecting the joints of the pelvis partook of the relaxation which the other soft parts take upon themselves — that they stretched, and actually allowed the bones to be parted asunder to a certain extent. I believe this to be an erroneous opinion; at the same time I cannot help thinking that those ligaments which bind the sacrum to the ischium (the *sacro-sciatic ligaments*) become softened in a degree, by the same actions which cause the vagina and perineum to become relaxed, and that to a rigidity in their structure may sometimes be attributed lingering labour. However, many anatomists of distinction have considered that the bones of the pelvis do really become somewhat disunited under all labours; and it is to be remarked, that in some animals—the cow, the mole, and others—such a circumstance has been said to occur; but of this I have no personal knowledge.

ON DENTITION;

WITH AN

ATTEMPT TO EXHIBIT THE OCCASIONAL PRESENCE OF CERTAIN DISEASED CONDITIONS OF THE BODY,

As connected with its Irregular States.

By Dr. Ashburner.

Dentition is but a part of the course of the development of the body. The whole subject of growth is curious and important, and physiology offers no series of phenomena more remarkable than those which relate to it. The anatomy of the changes undergone during the successive periods of life, by the various organs of the body, and the history of the regular trains of events which establish for each part of the frame its determined epochs of existence, of expansion, and of decay, are sources of interest to all who delight in inquiry. To the practical physician they are of great importance; for the irregularities or deviations from a perfectly healthy standard of structure at any time of life, ought to be the foundation upon which all his knowledge is built. The irregularities in the course of dentition possess an importance that has not yet been sufficiently estimated.

It is well known that no part of the frame assumes at once the degree of perfection necessary for the complete performance of the functions to which it is

destined. In order that the unfolding which accompanies growth—the evolution which is known by the term development—may be complete, a certain time is required; and as the whole frame is composed of many parts having among themselves mutual relations, the periods of their progress are characterized by events that are marked by the importance of the part to which they have reference. Each portion of the organism seems to be developed in its own turn, and its epochs of commencing existence, of improvement, and of decay, as well as its weight of influence on other parts, appear to have some relation to its importance in either the general government or the preservation of the being. Perhaps there is no law of growth better established than that which assigns to each organ, and to the entire organization, certain periods of progress, that in a normal and regular order obey a determined course (Loi de Developpement; Meckel, Manuel d'Anatomie, traduit par Jourdan et Breschet, tom. i. p. 43.) During each of these periods there is the acquisition of a higher state of perfection up to a certain time of life.

If there exist any circumstances determining an irregularity in the occurrence of these periods, the *normal* order is subverted; the *rule* which obtains in the majority of instances where a healthy and convenient configuration of the body is present, must be broken, and the epoch, arrive when it may, is *anormal*. Nothing exists in nature that is not the subject of a law; and in animated nature, whenever circumstances intervene to obstruct the due course of a law, an irregularity is established which is the immediate source of an inconvenience. In the whole body, in every part of the body, in a condition of *perfect health*, there is a determined configuration, which is *normal*; a configuration the most convenient for the proper performance of the functions to which the body or the part is destined; a configuration, considering the large majority of the race, recurring more often than any other, and consequently regarded as the standard rule of regular structure. If there be an aberration in any instance from this convenient arrangement, the formation is said to be *anormal*. Normal development, then, relates as well to the perfection of form as to the regularity of epoch in the course of growth. There is a law established by Geoffroy St. Hilaire, that the development of one organ in excess is always at the expense of another. (Philosophie Anatomique des Monstr. Humaines, tom. ii. Discourse Prelim. p. xxxiii. et p. 244.) In the growth of organs, and in their relative development, much depends upon the alliances they have with each other. The intimacy of connexion in the performance of functions that one organ has with another, is not so easy to establish as might be imagined; but observation leads to the conclusion that imperfections of parts, either from a diminished share of development, or on the other hand from excessive growth, tend always to irregulate the functions of other parts associated in duties with them. The French authors, in distinguishing these aberrations from normal configuration, where the case arises merely from an excess or a diminution of growth, give to them the appellation of *vitiations:* they say a part is vitiated by excess or by diminution. A woman who has a pelvis well-formed in other respects, but too small for the proportion of her body, is said to have this part vitiated by excess of littleness (*vicié par excès de petitesse. Maygrier des accouchemens*). The health of the individual, however, in such a case, is said to be perfect, since a diminutive pelvis does not interfere with the due performance of the ordinary functions of the body. If our distinctions between normal and anormal conditions of configuration be philosophical, they should be severely established. There can be nothing more loose in the application of terms than to denominate that condition one of health, in which an anormal configuration exists that may, under probable circumstances, cause the severe suffering of the individual, and perhaps her death. *Complete health* ensures a regular progress and perfection of each part of the system; a harmonious combination and alliance of all the different organs, for the general convenience of the whole; the best performance of all the functions in their regular trains; the happy development of each part in its due order, without pain or the presence of any other evil: a course of events always flowing where normal trains are quite established.

But if the trains of growth be irregular, or anormal, there may be a ques-

tion as to the parts first affected by the irregularity, and as to the importance and alliances of such parts. An error of a part necessarily involves an inconvenience—an undue performance of a function. If the organ be influential in its alliances, the error may produce immediate suffering, and even be the antecedent of death.

In man, endowed as he is with a proportionate large share of brain, the influence of circumstances operating through the nervous system may tend very materially to anormalize the trains of growth, and to irregulate the periods of organic development. The artificial habits to which he appears, under the present arrangements of society, to be destined, are constantly productive of injury to the frame; and though no animal appears to have so elastic a power of adaptation to nocent circumstances, he cannot altogether escape their force.

These observations are no where more strikingly illustrated than in the phenomena which occur during the progress of dentition; a train of development that presents epochs in life often irregular, in civilized communities always more or less stormy, and that, from the intimate alliances which subsist between the brain and nutrient organs, entails consequences of great importance.

The changes which the teeth undergo in the progress of their growth form a very curious and a very interesting subject of inquiry. There are, perhaps, no occurrences relating to the changes of the body during life, more striking than the manner in which all the rudiments of the teeth are disposed in the jaws. The structure of these rudiments is so curious—the mode of their alteration, their evolution not hasty, but at distinct and marked periods—their symmetrical consent in arranging themselves in pairs round the circumference of the alveolar arch—their relations to this arch, and the consent which obtains between the development of this part of the body and the growth of the teeth themselves—the changes of maturity, and decay in the first set, and their replacement by another—are all subjects for deep reflection.

Regarding them simply, then, as isolated portions of the general organism, the history of their development is full of remarkable phenomena; but looking to their sympathies as organs of a curiously complicated structure in alliance with the brain, nearly related to the other organs concerned in nutrition, and furnished with nerves that are linked with the great sympathetic, the varied influences they possess afford a most extensive subject for observation. We may ask, what are the most essential circumstances attendant upon a normal development of the teeth? and what are the causes tending to anormalize it?

The bones are regarded as the solid framework upon which all the rest of the body is built, and although we know that ossification commences at an epoch posterior to the existence of some other organs, and although we are aware that a moulding of bone is thrown over some other important part of structure which has previously existed, we are no less right in giving its due share of importance to the osseous fabric. In all parts of the body where the bony development does not proceed in a normal train, there is surely some error of structure in its vicinity. The functions of the part to which the bone serves as a standard or defence, cannot be performed in a manner consistent with *perfect health*. Disease of any kind in a bone entails mischief to the functions of the muscles in its neighbourhood, or with which it may be connected; nor is this the only inconvenience that may result. The whole body depends for its health on the existence of a due harmony between all its parts, and the moment when that harmony becomes disturbed, there is a discordance established, which more or less extensively affects the health of the system. The alliance between bones and muscles is very intimate, and the healthy growth of each depends upon the due performance of the functions of the other. The shape of a bone cannot be quite normal, if the muscles that are in connexion with it do not rightly and according to rule perform their duty; nor, on the other hand, can a muscle be in a perfect state of structure and health, if the figure of the bone to which it is attached be in any way imperfect. The habits of society are in many respects so irrational, that the measures conducive to the healthy performance of the various functions of our bodies seldom enter into our thoughts, and the influence of education in the healthy moulding of our frames, though occasionally considered, is not applied in a philosophic manner to produce the results which might emanate

from a wise direction being given to the events of a course of life. We may see a highly-educated musician fingering with curiously graceful facility the keys of a pianoforte, without reflecting on the inevitable improvement that must take place in the development of the bones, the tendons, and muscles of the hand and arm. We may reflect on the means which render the chest and the arms vigorous and well developed in the frame of a boxer or of a rowing boatman; but the facts, although striking, are not applied with any philosophic care in our schemes of education, to the training of the human form, in order to promote a healthy development of its organs,—a growth unattended by pain, inconvenience, or sympathetic evil.

We think little of the direction which may be given by art to the trains of growth, so as to determine the perfection of the most beautiful as well as most healthy form of which it was intended that the organs of the body should be susceptible. The vile taste and unnatural fancies that prevail on the subject of dress, are quite sufficient to bear out the justness of this observation; and it is very curious to remark, how far the influence of these circumstances reach, in not only disfiguring the external aspect of the trunk, but in promoting, under various conditions, aberrations from normal shapes and structures in parts little considered by the mass of mankind to be under their pressure.

It is quite true that the whole fabric is formed of parts so curiously allied one to the other, that the irregulation of one important organ drags after it other parts, which share in the mischief it has suffered. Hence we find that in frames not vigorous enough to withstand the effects of badly-applied dress, the bones become turned out of their normal relations to each other: the muscles allied to them are altered in their symmetry, size, shape, and direction: that other important organs suffer errors to be established in them in a manner that has been little noted as influenced by such causes.

If an individual with a curved spine be observed, in whom any remarkable gibbous state is present, we cannot fail to notice the effects entailed on the countenance, and the consequent expression which is given to the features; but we observe this consequence very seldom, if the curvature has not dragged the face after it in a very striking manner. Nevertheless, the consequence does follow the antecedent circumstance, and its degree may have been sufficient only to diminish the size of the jaws; to render them too small for the space which nature requires as the normal dimension for the proper development of the teeth.

It is very reasonable to believe that, if there be not sufficient space in that part of the bony fabric in which the teeth are placed for their full growth and proper position, they cannot be normally developed. The most essential circumstance, then, attendant upon a normal development of the teeth is a normal and consentaneous growth of the jaws.

We have already regarded some of the circumstances which may tend to anormalize the growth of the jaws. But there are others which may be considered at a future period, and in a more advanced condition of civilization, when the folly of many of the passions in which we now indulge, and the ignorance of the habits to which in the present state of society we liberate ourselves, shall be fully understood and allowed, as the causes operating to produce not only deviations from normal structure and consequent misery to individuals, but a tendency in numbers to form diseases that may reverberate upon the community. There may be habits among individuals, or among classes, that may have the influence of making the nisus of development more energetic in one part, and more sluggish in another. The frame being habitually submitted to the modelling which certain trades and occupations force upon it, is apt to lapse into a diseased condition, altering the relative normal influence exerted by one part upon another. The inevitable necessity of living in a large town has so powerful an effect upon the nervous systems of some persons, as to be destructive of the balance that ought to exist among the organs in a healthy state. These and many other circumstances may be found to operate either immediately, or through intervening events, upon the growth of the jaws. Rickets appear in individuals, and if the disease arrives at a time of life when the teeth are not fully developed, it may tend very materially to anormalize the relative trains of growth. May not a *vitiation* of the jaws result from the mind being accustomed to certain ha-

bitual trains of thought, or from bad habits that induce those trains, which give an expression to the countenance, determining the configuration of the face? An anormal state of the jaws may be the consequence of disease superinduced by the ill-advised practices of ignorant parents.

Dr. John Clarke, in his Commentaries on the Diseases of Children, p. 46, says, "It cannot reasonably be maintained that a child's mouth without teeth, and that of an adult furnished with the teeth of carnivorous and granivorous animals, are designed by the Creator for the same sort of food;" and yet, notwithstanding the clear injunctions enforced by this talented physician, the practice of feeding infants with materials unfit for their tender stomachs, obtains very commonly in quarters where it ought long ago to have ceased. There is no reckoning upon the amount of influence which improper food taken into the stomach at the tender age of infancy, may have upon the progress of growth in the jaws. Improper food itself commits an injury upon several parts of the alimentary canal, which may recoil upon the structure of the jaw. In very young infants of a highly irritable and mobile condition of nervous system, if any other food than human milk be given, there is in many cases an immediate diarrhœa, with rapid atrophy, and an aspect of countenance which must tend to alter the healthy modelling of the jaws. There is an effect of indigestion that may be called the sensation of physical grief: it is felt at the back of the fauces and along the throat, and resembles the sensation which those know who have suffered from mental grief. Its tendency is to depress the countenance, and consequently in a certain degree to interfere with the progress of development about the face. Perfect health requires a certain joyous expression, and the absence of all evil trains of thought. In childhood, especially, should complete happiness prevail. It is hardly necessary to point out the incompatibility of habitual indigestion and cheerfulness.

But there are other requisites to a normal development of the jaw which improper feeding denies to the infant. The normal consent between the muscles of the jaw and the muscular structure of the stomach, is unhinged—the balance is destroyed, and the stomach has to perform a share of duty never intended for it. In the carnivorous animals, the muscular apparatus of the stomach has a development bearing an inverse proportion to the muscles of the jaws, (Bichat, Anat. Descrip. t. ii. p. 40); and certainly in man the ratio does not approximate to the type of the ostrich. The lower jaw is so articulated with the upper that it is capable of various motions, when acted upon by any of its five pairs of muscles. In the act of sucking, each of these muscles performs a share of duty, and the correct progress of growth in each muscle depends in some measure upon the shape of the body submitted to the mouth, and the consequent practice and direction of the forces exerted upon that body: hence the course of practice of the jaws, the mouth, the tongue, and their muscles, cannot be the same, if exerted upon spoon meat, as upon a nipple of a woman's breast. Nor is this all. The muscles attached to the jaws are associated with other organs in the train of their duties. The bloodvessels, absorbents, and nerves, the salivary glands, and the follicles of the mouth, are dependent for their healthy action upon the normality of neighbouring parts: the influence of the whole set of organs is necessary for the existence of a harmonious consent, without which development is irregulated. Growth to be correct in the jaw implies the requisite performance of all the functions of the organs in its neighbourhood. If any organ be in fault—if its functions be arrested, its growth, too, is retarded; nay, in some cases, it dwindles: at its expense, some other organ is developed in an undue proportion; perhaps the muscular structure of the stomach may be the part that acquires a morbid growth, and consequently obtains a morbidly disordered function that recoupes upon the development of the jaws.

A question to which, in the present state of our knowledge, it would be very difficult to reply, is, How far may irregular formation, induced by the unphilosophical artifices of society, be reverberated in the structure of offspring? Each child, of a train born at successive periods of the parents' life, retaining the resemblance of the organization peculiar to the parents at the time it was called into existence, may under this idea have laws impressed upon its fabric, which shall determine it to assume all the errors or anormal peculiarities acquired by

the faulty habits of the parents. Without some admission to this effect, we find it difficult to understand how, in certain families, through successive generations, there is a prevalence of narrowness about the chest—a tendency to curvature of the spine—a proneness to a diminution about the pelvis—the existence of jaws too small for the teeth. When the philosophical anatomists have unfolded to us a few more views, it may be that we shall be enabled to trace with greater accuracy the sources of deviation from normal form in families. Meantime, enough is established to allow a conviction that there are certain laws governing even the deviations from usual and convenient structure, and where these laws have begun to operate before birth in fixing a tendency to the vitiation of the jaws, we have at present only left to us to watch the facts connected with them. If the type of configuration in a family be anormalized, we know little about the causes; we are not yet sufficiently advanced in knowledge to be able to trace all the sources of congenital malformations.

[To be continued.]

ESSAY ON

AFFECTIONS OF THE BLADDER IN PARAPLEGIA.

By Thomas Blizard Curling, Esq.

The anatomy and physiology of the nerves have been so successfully investigated of late years, that an opportunity is afforded of explaining many of the complicated phenomena of disease, by a consideration of the functions of this intricate system.

I propose in this essay to endeavour to account for certain symptoms observed under circumstances of privation of nervous influence, of which I am not aware that any satisfactory explanation has yet been offered.

It is now generally admitted, that after injuries of the spine, death is frequently occasioned by disease in the urinary bladder, accompanied by an ammoniacal condition of the urine. The same has been observed in paraplegia arising from other causes, as ramollissement of the medulla spinalis*, or tumors in the spinal canal. Mr. H. Cline invariably found, after paraplegia had been produced by the injuries he inflicted on the spinal marrow of dogs, that the bladder became affected.

The object, then, of my inquiry, is to ascertain whether the disorganization of the bladder, and alkaline condition of the urine, after injuries and diseases of the spinal cord causing paralysis, are dependent upon the loss of nervous influence.

The explanation which has been given by many surgeons is†, that "in consequence of the bladder having lost its nervous energy, the urine becomes decomposed in that organ, as it does after it is voided under ordinary circumstances, and thus acts as an irritant on the mucous coat." This exposition, I think, admits of question, since we have no evidence whatever that mucous membranes exert any influence over the fluids which are in contact with them, otherwise than through the medium of their secretions, or by absorption; nor is there any apparent necessity for the bladder possessing the property of preventing decomposition of the urine. The different parts of the animal machine, although often beautifully accommodating themselves to altered conditions, are still intended for existence in a healthy, not in a diseased state: hence, when the functions of the bladder are unimpaired, if its contents should remain sufficiently long to become decomposed, there is a stimulus to evacuation, and the urine is expelled. That the urine may, and frequently does, become decomposed from long continuance in the bladder, is sufficiently obvious; for when it is relieved in cases of retention of urine, or enlargment of the prostate gland, a strong ammoniacal odour is often emitted.

The bladder is supplied with nerves from two sources—from the sympathetic system, and from the medulla spinalis; the former is said to furnish it with its involuntary, and the latter with its voluntary powers. But the spinal cord is also the source from whence the nerves communicating sensibility to the bladder are derived; for when the medulla spinalis is injured, not only is the voluntary power lost, but the sensibility of its

* Brodie on the Urinary Organs, p. 161.
† Cooper's Lectures, by Tyrrell, vol. ii.

mucous surface is destroyed. Bichat has observed, that "every part of the mucous system bears a certain relation to the fluid which habitually covers it, and could not bear the contact of others without pain;" from which it is evident, that the sensibility of mucous membrane, like every tissue and organ in the human body, differs in kind and degree according to the necessity of the part. As other structures, then, the bladder possesses its own appropriate sensibility —a sensibility which is the cause of contraction when the viscus is distended, or its contents are hurtful and irritating, and which is excited by the presence of a foreign body. This sensibility, however, is influenced very much by habit, which constantly tends to render the sensations less lively.

Sir C. Bell has beautifully shewn, that sensibility is eminently essential to the preservation of the healthy condition of different structures; therefore, however perfect the voluntary powers may remain, when the susceptibility to the impression of pain is lost, parts are constantly exposed to injury. If the delicate sensibility of the conjunctiva of the eye be destroyed, by dividing the fifth pair of nerves, particles coming in contact with this membrane produce excitement, give rise to a blush of redness; but the muscles of the lids are not called into action to remove the offending substance, so that inflammation, eventually destructive to vision, is the consequence. When the nostril has lost its sensibility from an affection of the fifth pair, sneezing cannot be excited. When the sensibility of the tongue and cheek is destroyed, the morsel is permitted to remain in the mouth until it actually becomes offensive, although the motions both of the tongue and cheek remain unimpaired. If, therefore, the sensibility of the bladder be destroyed, when it becomes distended, or the urine is highly acrid, there is no stimulus to induce it to contract and expel its contents; consequently, however perfect the muscular power may be, it is rendered constantly liable to suffer from over-distention, and the injurious effects of urine possessing acrid properties, which properties frequently become still more irritating, in consequence of the urine being allowed to remain a sufficient time in the bladder to become decomposed.

Should, however, the sensibility of the bladder remain, but its muscular power be paralyzed, as is not unfrequently seen, inasmuch as it is sensible to injurious impressions, and consequently recourse is immediately had to art to relieve it, so under these circumstances it is seldom observed to suffer.

In order to contrast still more strongly the phenomena resulting from the loss of sensibility on the one hand, and the loss of voluntary power on the other, I will refer to two exceedingly interesting cases recorded in the Medico-Chirurgical Transactions. One is a curious instance of anæsthesia*, described by Dr. Yelloly, formerly physician to the London Hospital, in which the patient, a man 58 years of age, entirely lost the sensation both of the upper and lower extremities, at the same time that he possessed a perfect power over the muscles. The other is an extraordinary case of the loss of voluntary power, detailed by Dr. Bostock†.

A man between 40 and 50 years of age gradually lost voluntary power, first over one lower extremity, then over the other; his hands and arms were subsequently affected in a similar way. He then became unable to articulate properly, and was soon entirely deprived of speech; he lost completely the power over the muscles of the neck and the lower jaw, and deglutition also was considerably affected; his head always fell upon his chest, unless artificially supported; there was a constant flow of saliva from his mouth; he was frequently almost suffocated with mucus, or convulsed with ineffectual attempts to expel it. And yet, notwithstanding this loss of power over nearly all the voluntary muscles of the body, but few of the functions were interrupted; there was no numbness or insensibility of any part, either to mechanical impressions or to changes of temperature, and all the external senses remained uninjured to the last; whereas, in the first case, in consequence of the loss of sensibility, the patient was constantly exposed to accidents, receiving blows, suffering from pressure, placing his feet in boiling water; and it is related, that his hands were never free from blisters, which he got by inadvertently putting them too near the fire.

Hence, then, I would *partly* explain the affection of the bladder in these cases, upon the same principle that, in

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* Vol. iii. † Vol. ix.

cases of insensibility of the lower half of the body, it is almost impossible to prevent inflammation, terminating in mortification of the parts subjected to pressure in lying.

It is admitted that the nervous influence powerfully affects the function of secretion. When the eighth pair of nerves is divided, the stomach cannot secrete the gastric juice, so that food subsequently taken remains undigested; and in a rabbit upon which the experiment was made, the animal went on eating parsley until its stomach was gorged, because it was not conscious either that sufficient food was received to satisfy the calls of hunger, or that the viscus was replete.

In cases of stone, the vessels of the mucous membrane at the neck of the bladder are stimulated to increased secretion, in order to protect its surface from the irritation of a foreign body. But when the influence of the medulla spinalis is cut off from the bladder, the secernent function of its mucous surface becomes impaired, so that mucus, which is its natural defence from the acrid properties of unhealthy urine, is not duly secreted for that purpose.

We are as yet unacquainted with the nature of the influence of the nerves upon secretion. When the conjunctiva is irritated by particles of dust, there is increased secretion of the lachrymal gland. When the sense of taste is excited by food in the mouth, the saliva becomes more abundant; but if the fine sensibility of the conjunctiva and the sense of taste are wanting, these effects are not produced. May not, therefore, the privation of the secretion of the gastric juice, when the eighth pair of nerves is divided, be attributed to the insensibility of the stomach to the presence of food? Also, when the fifth nerve is divided, may not the cause of inflammation of the conjunctiva be partly ascribed to a deficiency of tears, and of its natural secretion, so necessary for the protection of this membrane, in consequence of its insensibility to the presence of irritating particles? If, then, the sensibility of the mucous membrane of the bladder be lost, the medium of communication to determine the necessity for an increased secretion is destroyed: hence, if even it be allowed that in paralysis the secernent power of the capillaries is unimpaired, as there is no stimulus to excite secretion, so that function is not performed, for the same reason that in paraplegia the voluntary power over the bladder is lost, not in consequence of the muscular fibres being rendered incapable of contracting, but because the means of communicating the necessary stimulus is wanting.

I have endeavoured to shew, that when the urinary bladder is deprived of the nervous influence which it receives from the medulla spinalis, the natural stimulus to evacuation being lost, it is constantly subject to the injurious effects of over-distention, the acrid properties of unhealthy urine, and the frequent irritation of a catheter: there is a deficiency of the natural secretion necessary for its protection: under such a combination of unfavourable circumstances, it certainly is not surprising that the bladder should almost uniformly become diseased. It appears, therefore, that a variety of causes constantly tend to irritate and excite inflammation in the bladder when it is thus partially deprived of its accustomed nervous influence.

The morbid appearances presented by the bladder after death are—apparent increased vascularity of the mucous membrane, which is generally of a dark or grey colour; and sometimes patches of red are observed upon it, which, when closely inspected, are seen to be composed of vessels minutely injected; flakes of lymph are found adhering to its surface, often also a ropy mucus, containing a white powder, possessing alkaline properties. Sloughing of the mucous membrane has also been observed; the urine remaining in the bladder is generally excessively offensive, and a mucopurulent fluid is frequently mixed with it. There is effusion into the submucous cellular tissue, and the bladder has sometimes been found ulcerated. Mr. Swan possesses a bladder taken from a patient who died after a fracture of the spine, where a perforation through the coats into the cavity of the peritoneum had been made by ulceration.

I will next consider the alkaline property of the urine existing in these cases. Is it the *cause* or the *consequence* of the diseased condition of the bladder? Every one who has read the able treatise of Dr. Prout on Urinary Affections, will recollect the remark, "that a large proportion of the cases of deposition of the earthy phosphates which have come under his observation, has been dis-

tinctly traced to some injury to the back;" and in a note he informs us, that he has frequently observed jaded and worn-out horses pass great quantities of lime in their urine; and he has known the same also to take place in dogs, particularly of the sporting kind: and in both these instances he has thought it probable that the circumstance was connected with some strain or injury of the back, produced by over-exertion, or other causes. Mr. Earle has written a paper, in the 11th volume of the Medico-Chirurgical Transactions, in which he has attempted to shew that the formation of renal calculi is frequently caused by a local injury to the loins and kidney. I have no doubt but that a local injury to the kidney, by exciting inflammation in that organ, may be the cause of urine possessing alkaline properties being secreted, or that the same property may be communicated to the urine by morbid secretions from the kidney; but it is evident that the alkaline urine so generally observed after fractures of the spine, is not to be attributed to any injury to this gland, for, as Mr. Brodie has observed, "it is remarkable that this effect is equally produced whatever is the part of the spine that is injured, whether it be the loins, or the back, or the neck*;" and as I have already said, it is found in paralysis resulting from disease in the medulla spinalis. In the examination after death of two patients who died in this hospital after fracture of the spine, I found no perceptible deviation from natural structure in the kidneys. Mr. T. H. Smith, in some remarks† on this subject, does not dissent from the most general opinion as to the cause of the affection of the bladder, but merely as to the source of the altered state of the urine; for, he says, that it is "a matter of demonstration, that in cases of injuries to the spine producing paraplegia, urine is constantly arriving ammoniacal in the bladder." This view is supported by the following experiment, in a case of fracture of the seventh cervical vertebra‡:—"The urine was observed to be highly ammoniacal when drawn off, the bladder was then washed with warm water, injected and withdrawn till no trace of ammonia could be perceived: a small portion of clear water was then thrown in, and permitted to remain for some time; and on removing it, decided traces of ammonia were perceptible. Sufficient time not being given for decomposition, it is evident the urine arrives ammoniacal from the kidneys." This experiment, I think, by no means warrants the strong conclusion that has been drawn from it. An alkaline property might certainly be derived from some other source than from the kidneys; as, for instance, from the mucous membrane of the bladder: the alkaline matter contained in the thick, tenacious mucus, adhering to its internal surface, whilst the water was retained for some time, might become dissolved or suspended in the fluid, and thus impart an alkaline property: or, again, the fixed alkali contained in the secretions of the bladder might, as explained by Dr. Prout, produce decomposition of the urea, and thus the ammoniacal condition of the urine would be accounted for. I by no means, however, deny the possibility of urine coming ammoniacal from the kidney; for when the coats of the bladder are extensively diseased, the kidneys generally participate in the affection.

I believe, then, that the alkaline property of the urine in these cases, is originally dependent upon the diseased state of the bladder, as in ordinary chronic inflammation, where the mucus, which is abundantly secreted, is highly alkalescent, under which circumstances the urine would become decomposed, or acquire similar properties; but as a secondary cause, in consequence of the febrile excitement of the system, and debility which takes place after these severe injuries, as well as of the extension of inflammation along the mucous lining of the ureters, the kidneys also become liable to secrete alkaline urine, in which case containing the triple phosphate, and therefore rendered more stimulating than healthy urine, when arrived at the bladder, it would tend to keep up and aggravate the inflammation already existing in its unprotected mucous surface.

Perhaps in some of the cases of alkaline deposition alluded to by Dr. Prout, the state of the urine might be attributed to the strain or injury of the back affecting the medulla spinalis, and thereby impairing the sensibility of the bladder, which would probably lead to chronic inflammation being excited.

* On the Urinary Organs.
† Med. Gaz. vol. ix. p. 661.
‡ Ib. vol. i. p. 225.

The conclusions which the present inquiry has led me to form are, 1. That the morbid state of the bladder so generally observed after injuries and diseases of the spine, causing paraplegia, results from the loss of the natural sensibility of its mucous surface. 2. That the alkaline condition of the urine is produced primarily by the morbid secretions of the bladder, and secondarily by the altered secretion of urine arising from a debilitated and irritable state of the system, or a sympathetic affection of the kidneys.

As the chances of a favourable issue in these important cases must be considerably diminished by so serious an affection of the bladder, the practical application of the inferences resulting from this investigation merits the best attention. It must be confessed, however, that after a fracture of the spine, but slender expectations can be entertained of any permanent benefit, even by the most skilful treatment, and little more can be effected than a mitigation of the symptoms, or protraction of a fatal termination. I would suggest, notwithstanding the susceptibility of the bladder, when deprived of its sensibility, to the injurious effects of a foreign body, that as a lesser evil the gum elastic catheter should constantly be retained in the bladder, and the urine drawn off at least six times in the twenty-four hours. If the urine appears acrid, it would be advisable to inject the bladder with warm water, or some mucilaginous liquid, as a substitute for its natural secretion; and when inflammation is established, and the urine is decidedly alkaline, I would exhibit acids internally, and make trial of Mr. Brodie's recommendation, of injecting the nitric acid duly diluted.

THE HYDROSTATIC BED.

To the Editor of the Medical Gazette.

Sir,

I beg to inquire of any of your correspondents who have used the hydrostatic bed, the best mode of preventing the inconvenience arising from condensed perspiration. Living in a remote part of the country, without an opportunity of seeing one, I have had a bed of this description constructed, which succeeds in every respect, except that the perspiration, sensible or insensible, is condensed in such quantity, as to saturate with moisture every thing beneath the body. I endeavoured to remedy this by a sheet of corks netted together, with interspaces about equal to their own size, by which a stratum of air might be admitted to the under surface of the bed, which might carry off the moist vapour, and prevent its condensation. If the interspaces are larger, the corks are impressed into the surface of the water, and the water-proof cloth collapses with the tissue above. The plan succeeded in part; the moisture was not so troublesome; but still it did not entirely escape.

The desideratum is an apparatus for completely ventilating the under-surface of the bedding, without preventing the water from receiving the impression of all parts of the body, according to their weight; for in proportion as this is interfered with, the advantage of the hydrostatic bed over others is diminished.

I am, sir,
Your obedient servant,
O.

September 30, 1833.

MEDICAL EDUCATION.

To the Editor of the Medical Gazette.

Sir,

I will again avail myself of the opportunity afforded me of addressing the profession, through the medium of your valuable journal, on the subject of medical education.

The vast improvements that have been made in the education of the medical student within the last few years have been so decided and so important, as to encourage those who feel interested in the diffusion of liberal and extended views, to consider them as the precursors of that reform of the whole system of medical education which must take place before the profession, as a body, can attain that rank which it is entitled to.

There is no profession which requires of its votaries such a general fund of knowledge, such enlightened views on every subject, and such a high sense of the importance of moral conduct; and

yet how many, alas! are there, who consider themselves capable of practising it as soon as they have walked, as it is significantly called, the hospital for two years. The feelings which dictated the observations in the following letter have been long excited in my mind, from the regret which I felt in seeing many young men; possessed of strong natural abilities, come to the hospital with minds as little prepared, as far as previous employment of them is considered, to embrace the vast field of study opened to them, as an effeminate man of luxurious habits to undertake, on a sudden emergency, the heavy work of a common labourer; the one individual has not his muscles prepared, and the other his mind.

I firmly believe that the root of this evil is their previous education. Too many, immediately after they leave school, are sent to an apothecary's shop to mix medicines and to roll pills for at least four years of their lives. If their master has much practice they have little time for any thing else; and what little they have they require for recreation after the drudgery in the shop. If he should not have much to occupy them in the dispensary, there is often but little inclination on the part of the master to encourage real study, lest it should interfere with attention to the counter. Besides, that deep attention and total abstraction of the mind which the medical student ought to feel it his duty to give to the study of his profession, is quite incompatible with the degrading feeling that he is little better than a servant with a more courteous title, and that it is his duty to execute a task which is merely mechanical, and requires no exertion of his intellectual powers.

The circumstance of apprenticeship has been several times brought before the public; but it appears to me that it has not been properly viewed, and that medical men have often been abused for not educating their apprentices better, while the real root of the evil has been with the father, who, because he thinks that he cannot allow his son to spend that time in the active duty of his profession which is really required for his education, manages to make him pay for his education, by obliging him to serve as a menial in dispensing medicines.

No medical man could take apprentices at the low fees which they do in the country, without the apprentice paying his master by his services during a certain number of years, for what is falsely called his education. The fault does not lie with the medical man for obliging his apprentice to devote his time to his business instead of studying his profession, but for the farce of pretending that, in taking him as his apprentice, he is really promoting his education.

I sincerely trust, that as surgeons have risen from the rank of barbers, and apothecaries are rising from that of shopkeepers, that we shall soon hail the day when men intended for a liberal profession are no longer obliged to pay for their education by performing the part of servant.

But do not suppose for one moment that I am an advocate for increasing the expense of a medical education; on the contrary, the cheaper it is the better, so that its cheapness does not interfere with its efficiency; and in proof that it need not, I would refer to the plan of education in Scotland.

Every liberal man must feel delighted with the opening of provincial schools in most of the large towns in England; it will make medical education more economical, and in that way open a wider field for all who wish to embrace it.

Every teacher in London ought to rejoice that, instead of men coming to London as they used to do, ignorant of every branch of their profession except that of compounding drugs, they may now come up with a knowledge of at *least* the rudiments of the science, and with minds fitted to comprehend the more abstruse principles of a profession, which will take a man his whole life to become acquainted with.

Having said so much in reprobation of what I consider the disadvantages of the present mode of medical education, I will in my next letter give a brief outline of what appears to me would be an improvement,—more with the hope of rousing others to consider the same subject, than under the idea that I consider them the best that could possibly be devised.—I remain, sir,

Your obedient servant,

SAMUEL SOLLY.

5, St. Mary Axe, Sept. 28, 1833.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

A Treatise on the Urethra and its Diseases, especially Strictures, and their Cure. By BENJAMIN PHILLIPS, Esq. M.R.C.S. &c.

IF the gravity of any class of diseases be estimated by the quantity of attention which would appear to have been devoted to its consideration, few, or perhaps none, would possess this character in a higher degree than the diseases of the urinary apparatus. Although we are not disposed to deny that the subject imperatively requires a very accurate knowledge of the effects of disease, and that this knowledge cannot be acquired without study, yet we cannot admit that the two very favourite subjects, diseases of the urethra and of the rectum, are paramount in importance to all others.

In addition to the works of Home, Bell, and Brodie, upon the Diseases of the Urethra, we have had in this country a host of publications of a more ephemeral character.

On none of those works has more care been bestowed than on the one before us; neither shall we find, in any of them, so minute a consideration of the different systems of treatment which have been adopted. Indeed, whoever wishes to acquire a knowledge of the history of these diseases, will find it no where more accurately delineated than here.

As we cannot admit into our pages very lengthened reviews of any works except such as are too expensive to be within general reach, we shall merely allude to any novel or important points which may be presented in the one before us. In the chapter which is devoted to the "Anatomy" of the organs, we find an ingenious inquiry into the direction of the canal, and a sketch of the mode of development of the prostate. Although a doubt exists whether the doctrine of M. Serres be correct, yet its application here seems so appropriate that we shall transcribe it.

"Primitively in the human embryo we do not find the prostate; neither do we perceive it until the termination of the second month. At that period it is formed of four lobes; and this multilobular division corresponds to that of other organs in the embryo—as the kidneys, &c. From the fourth to the fifth month, the posterior lobes unite to form one, the prostate at this period appearing to consist of three lobes; and from the sixth to the eighth month all these lobes unite, and form, as in the kidney, a unique organ, which embraces the origin, or a part of the origin, of the urethra; yet, by an attentive dissection, we may discover, as in the kidney, traces of the primitive organization. It is evident, then, that if the union of these three portions be, under any circumstances, arrested, there may be presented a posterior and middle portion, which may be termed a middle lobe."

In the "Pathology" of mucous membranes, we think the author has done well to adhere pretty closely to the opinions of Thomson and Gendrin. Two questions of importance are, however, mooted—the one, that of induration, the second that of reproduction.

The question which arises on the subject of induration in mucous tissues, is this: when an induration is advanced, can it be removed by the absorbents? Our author is of opinion that it cannot.

"In the progress of induration (from the deposition of matter, and from the consequent increase of density), an obstacle gradually presents itself to the free ingress of fluids into the organ, and the indurated tissue then loses more or less of its colour and its vitality. The masses of matter which are deposited in the cells of the tissue are not susceptible of organization, and are almost inert; a circumstance which it is very necessary should be borne in mind. The performance of the functions of exhalation and absorption will be less active, and may, indeed, cease entirely, from the obliteration of the cellules of the tissue in which it is developed; the tissue itself having lost all indications of vitality."

"If the induration be of so long a standing that the vitality has become almost extinct, it cannot, I apprehend, be removed, except by the mechanical or chemical destruction of the tissue."

This is a most important question, for on it turns the efficacy or inefficacy of dilating bodies. With regard to repro-

duction, we think a less elaborate argument would have sufficed. We believe that reproduction of mucous tissues never occurs; but there can be no doubt that a tissue is produced which is capable of performing most, if not all, of the functions of the mucous membrane: indeed, if we plentifully apply caustic to the mucous membrane of the mouth, so as effectually to destroy the mucous membrane, in a few days we are unable to distinguish the membrane by which it has been replaced from that by which it is surrounded.

In the chapter on Urethritis, we see nothing which we need notice except a mode of curing obstinate discharges, by applying caustic to the floor of the canal, near its curvature: that this is the frequent seat of the irritation or inflammation which produces gleet, we have no doubt; that this mode of modifying vitality would be as effectual here as we find it on the surface of the body, is, we think, probable; but as we have never seen it applied, we cannot speak more positively on the subject.

We must, however, confess that we think it is frequently likely to do harm; simply because we believe it to be a delicate operation, and that it may be frequently maladroitly applied.

The chapter on "Catheterism" we will pass over; though the history of the ameliorations which have from time to time been introduced in the construction of instruments, is not without interest.

The definition of stricture given by our author is simple and perspicuous.

"I include in the term stricture, all those diseases of the urethra which are situated either on the surface or in the substance of the mucous membrane lining the urethra, or in the cellular tissue by which that membrane is surrounded; and which, by their presence, lessen the diameter of the tube, and present an obstacle to the free excretion of urine."

The next two chapters are occupied with the consideration of the different methods of treating stricture.

Our author does not admit that dilatation is applicable, except the disease be recent; and for the reasons we have already mentioned.

We are very certain that he has too highly coloured the inconveniences attendant on that method of treatment. He has, ingeniously enough, introduced the dicta of two eminent men, partisans of dilatation—Boyer and Söemmering; and they are certainly not likely to prepossess persons in its favour: but we are not disposed to admit the truth of the gloomy picture which the former gentleman has drawn. We are advocates for dilatation; we are so, in consequence of having had ample experience of its good effects. We do not consider it a specific, but we do believe that it is more frequently applicable than any other mode of treatment which has hitherto been devised.

In justice, however, to the author, we are bound to say that our opportunities of seeing caustic applied in the manner he prescribes have been few; and it is possible that if our opportunities of doing so had been more frequent, our opinion might be changed.

Cauterization is the treatment which our author advocates, in consequence also of having experienced its good effects. The instrument by which he applies the caustic, is, in principle, like that invented by Ducamp; but more like that of Lallemand, who introduced very important improvements into that of Ducamp. We admit freely that the caustic is so completely protected that no injury need be produced on any portion of the canal but that on which it is wished that the application shall be made; but we doubt whether the application will always be made on the diseased point. The question of consecutive contraction of the canal, after the use of caustic, is the most important point connected with this method: we confess that we are strongly inclined, from analogy, to believe that it will occur. Mr. Phillips maintains the contrary, and supports his opinion by facts. We know no one who has fairly made the experiment; reasoning upon it will therefore be useless. If his opinion be correct it is most important, and we trust it will be soon tested.

As to the "model bougie," we can give our readers a little information. We believe it to be an instrument well calculated to produce error—to be totally unworthy of confidence. Any thing which arrests its progress—a fold of mucous membrane, or a spasmodic action of the muscles surrounding the canal—will immediately compress it, so that when it is withdrawn it may present an impress quite opposite to that of the stricture; and may, indeed, give

indications of the disease when it does not really exist.

With respect to incision, either by the method of Dorner, of Physick, of Stafford, or of our author, we believe it to be bad—to be always attended with great risk; and that the probability of procuring any benefit which might not be obtained by more harmless means, is very problematical.

For a long series of years the medical world have, in the treatment of stricture, been divided into two parties: the one maintaining that a destruction of the mucous membrane is attended by the most serious consequences, the other seeing nothing to dread in destruction, however extensive.

The former party are influenced by a dread which is almost unaccountable—the latter certainly regarding it with too much *sang froid*. Every one will admit that if stricture could be cured without destruction, it would be worse than folly to resort to it; but if it cannot, it may become a matter of necessity. The strange portion of this subject is, that many of the persons who are so alarmed at a destruction of the mucous membrane by caustic, have no such dread of it when made by a cutting instrument. Does no destruction, for instance, take place in the common operation of lithotomy?—and does any ill effect usually succeed to this? They do not object to ulcerate it by means of a sound, nor to destroy it by making a forced passage: the fact is, their dread is centred in the word caustic.

It will be evident that we are not among those who are alarmed at such applications; all we doubt is the superiority of their beneficial effects. The fact is, that in all operations, to an able hand all instruments are good; to a bungler, there are none which are unobjectionable.

The author has introduced certain tables, intended to show the comparative frequency with which certain complications occur. We confess that we do not attach much value to such calculations, for we are not disposed to think the time very near when medicine will become an exact science.

We shall conclude this review with a *resumé* given by the author, which is an epitome of his opinions on this subject.

"I have shewn, I trust, to the satisfaction of every reader, that stricture of the urethra is a consequence of inflammation possessing either an acute or chronic character, which has affected, and still may continue to affect, either the mucous membrane by which the urethra is invested, the subjacent cellular tissue, or both simultaneously: that a discharge of a mucous or muco-purulent fluid accompanies inflammation of the mucous membrane of the urethra: that a tolerably complete occlusion of the canal may occur, in consequence of the engorgement of the membrane in acute inflammation: that a complete occlusion can scarcely occur in chronic inflammation of the membrane, in the absence of any foreign substance; but that a viscid mucus may attain such a consistency as to act in the manner of a plug, and produce a perfect occlusion: that if retention of urine be produced by acute inflammation, it is to an antiphlogistic mode of treatment that we must have recourse; and if that fail in procuring relief, we must puncture the bladder: that when occlusion occurs in chronic inflammation, we may expect to procure relief by forced injections: that in the earlier periods of organic stricture, before the mouths of the absorbents are blocked up, we may produce a cure by the judicious employment of pressure, effected by means of a bougie: that if induration have proceeded to much extent, the absorbents are no longer free to act, and the employment of bougies can produce no permanently good effect, and may prove injurious: that if the induration be considerable, we can only remove the embarrassment it occasions by accomplishing its destruction, either by a caustic substance or a cutting instrument: that destruction may be effected by the use of caustic: that in the application of this remedy, we need entertain no apprehension of injury to any but the indurated portion; and that the pain attendant upon the application of lunar caustic upon the indurated mucous membrane is inconsiderable: that when entire destruction is effected, we need not resort to consecutive dilatation; and that, if we do, it will be attended by no good effect: that the application of caustic to the anterior surface of a stricture should always be carefully avoided: that no case can occur, if we except peculiar idiosyncrasies, in which we may not, with the modifications described, apply the caustic to the interior of the stricture."

MEDICAL GAZETTE.

Saturday, October 19, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE GENERAL DISPENSARY.

DEFEAT OF THE LATE MEDICAL OFFICERS THE DOING OF THE *LANCET*.

THE Governors of the Aldersgate-street Dispensary have answered the appeal which was made to them; they have rejected, indeed, the proposals of their medical officers,—*but they have done as they were directed by the* LANCET. The trial of strength between the contending parties is now over; the question is virtually decided.

In compliance with a requisition signed by one of the Vice-Presidents and a certain number of Governors, a meeting was convened on Monday last, the object of which was to set aside the recent proceedings, and reinstate the Physicians and Surgeons in their places. With this view it was moved by the Rev. Mr. Pritchet, and seconded by the Rev. Dr. Russell, "that it is expedient to declare and enjoin a general amnesty of all that has occasioned personal altercation, or difference, in the arrangement of the affairs of the Dispensary;" which motion was immediately met by an amendment from the other side—"that peace and unanimity being essential to the prosperity of the institution, it is inexpedient to consider the causes which led to the resignation of the late Royal President and medical officers, or to adopt any other measures than those required by the laws of the institution in such emergency." The amendment was carried by a large majority, and followed by a vote of thanks to the Treasurer, Committee, and, in short, to all those who had been most active against the medical men.

That the physicians and surgeons would have made a better figure in this business had they shewn less disposition to resume the places they had resigned, cannot, we think, be denied. Nevertheless, they will carry with them the respect, the sympathy, and the approbation of their brethren. As to their successors, though we cannot lend our pages to libelling them, we must say that they will come into office, and be distinguished in after life, as the men who contemned the voice of the profession, loudly and unequivocally expressed;—that they were content to purchase their places at a price which few would think any appointments worth;—and that they voluntarily lent themselves to a degradation to which few would condescend to submit.

To express surprise at the result that has taken place, would be pure affectation: we never expected it to be otherwise; nor do we see any difficulty in assigning at least one of the causes which has contributed to the issue, and which will probably, for some time, lead to a like termination in all disputes of a similar nature. The medical profession has now, for a series of years, been systematically held up, by our notorious contemporary, as the most grasping, unprincipled, and worthless portion of society. It is very true that his abuse has been chiefly directed against those who have held appointments in any public charity; and that he has laboured, with malicious industry, to create a schism in the profession by uniformly assuming, that the mere circumstance of being attached to any public institution was an injury done to others—still fostering the jealousies of the excluded (necessarily the more numerous class), by drawing an invidious line of distinction between them and their more fortunate brethren, and by artful insinuations of some unfair advantages taken, or privileges denied. This has

been the system pursued, with cunning skill and hollow candour, towards the profession. But when, week after week, and year after year, every term of invective which the coarsest vocabulary and the most rancorous hatred could supply, was poured forth against those who were denounced as the "*ignorant, conceited, malignant, lying, insulting, boasting, Hospital Surgeons of this metropolis**," was it to be expected — was it within the range of possibility — that the more ignorant portion of the press, and the public at large, should fail to extend the application, and take the character given of those who held the most prominent stations in the profession as a fair indication of our merits as a body? The dark and bloody picture of all medical charities, so frequently drawn by the same hand, has been eagerly held up, on every occasion, to the wondering gaze of their readers by the editors of the daily press; to whom any thing to raise the wonder, or to gratify the curiosity of the vulgar, whether of high or low degree, is always sure to be acceptable, be it never so improbable, or notoriously false. Thus, whenever "a case" is made up by our contemporary, which, by any degree of distortion — any satanic blending of truth and falsehood — may place the medical man in an unfavourable light, it is published forthwith; and that none of its effect may be lost, means are not wanting to secure its being immediately transferred into the columns of some journal of more extended circulation than the original†. The effect of individual instances, dramatized to excite compassion for the sufferer or indignation against the profession, has been further increased by general and sweeping denunciations. "Hospitals, Infirmaries, and Dispensaries (says the Editor of the *Lancet*), have often been denominated HUMAN SLAUGHTER-HOUSES in the pages of this journal. Repeatedly have we urged the impolicy of supporting these institutions — repeatedly have we exposed the proceedings of the quacks by whom many of them have been founded—*and repeatedly have we described the* SCENES OF BLOOD *which are frequently exhibited within their walls**." And again, "the great majority of physicians and surgeons who fill the various offices in infirmaries and dispensaries, are only remarkable for their ignorance, impudence, and cunning: thousands of patients are annually BUTCHERED among the miserable in and out-patients of these *charitable* institutions†." It requires no great penetration to perceive the effect which sentiments of this description are calculated to produce upon the public mind; and though, by all well-informed people, the above would be looked upon as a piece of mere balderdash and raving, yet it is to be remembered that, in a large community, there must always be many who are both ignorant and credulous, and that such persons are ever apt to become the dupes of any crafty and unprincipled adventurer who has an interest in deceiving them. Nay, however incredible it may appear, there are those

> "That think men honest that but seem to be so,
> And will as tenderly be led by the nose
> As asses are:"—

we have actually heard commendation bestowed upon the candour of one, who, though belonging to the same fraternity as the delinquents, has yet had the virtue to expose his brethren, out of a pure regard for the public good; and while *he*, like the wily Venetian, "poured this pestilence into their ear," *they*, like the deluded Moor, were ready to exclaim—"Honest, honest Iago!" That this is no imaginary

* Lancet, vol. xii. pp. 205-6.

† The case for which Mr. Bransby Cooper brought an action against the *Lancet*, was published in the newspapers on the same day that it appeared in the *original*.

* Lancet, June 27, 1829. Vol. xvi. p. 401.

† Ibid, p. 402.

case, is proved in the present instance; for the *Herald* of Monday, in an article written expressly for the edification of the Governors of the Aldersgate-street Dispensary, and published on the very morning of the meeting, with a view to influencing their decision, takes occasion to refer, for the character of the medical officers of our public charities, to the identical journal of which we speak,—quoting, forsooth, the authority of the medical press against the medical profession, as being best acquainted with its real character. Distinct reference, we say, is made to the very vilest part of the medical press, in order that the Governors may be aware of the true nature and extent of the abuses practised by medical men in public charities; and as affording a good and substantial reason for the Governors of the Dispensary taking part with the Committee, and voting against the physicians and surgeons.

The jealousy and distrust of the medical profession in the public mind, have, we are convinced, been greatly fostered by these systematic calumnies; and the recent triumph over the medical officers of the Aldersgate-street Dispensary is but one instance among the many evils which have resulted.

In the present case, indeed, the injury to the cause of the professional men was not of an indirect or doubtful character; it consisted of no general declamation,—but a violent, vituperative, and specific appeal was made to the Governors of the Dispensary, in which they were called upon to inquire how the physicians and surgeons who asked for their support had themselves obtained their appointments. "Was fame (asks our Iago*) the cause of their success? No.—Their discoveries in medicine? No.—Great skill exhibited in the performance of medical duties? No." The question thus contemptuously asked, is speedily answered more specifically; for, a little further on, as an additional inducement to the Governors not to second the wishes of their medical men, it is argued that the sale of the appointments, as proposed by the Committee, would not be a worse system than the one it was intended to supersede, "for (observes this *friend* of the profession)—for ourselves we know not how to choose between the man who would obtain an office through the direct influence of money, and he who to ensure success would not scruple to resort to lying and intrigue†." But further, the very principle for which the medical officers contended was ridiculed as unreasonable and absurd:—"The proposition (says the *Lancet*‡) for preferring the vote of a fellmonger or a fishmonger of six months' existence to one of three days, in the selection of a medical officer to a charity, is assuredly bottomed in absurdity." Lest, however, some should be disposed to dissent from this position, another incitement was held out to the Governors to disregard the efforts of the medical officers, who wished to preserve the law of election unaltered, by an assurance that it could not possibly be made worse than it already was. "The subscribers of the charity need not interfere, for (observes our friend) we assure them it would fatigue their brains to devise any method which could deteriorate the one they already have‡."

Upon this hint they acted: prompted by the *Lancet* and backed by the *Herald*, the Governors suffered the law of election to be altered; as advised by Mr. Wakley, they have scouted "the proposition for preferring the vote of the fellmonger or fishmonger of six months' existence to one of three days," and now the medical appointments of the General Dispensary

* Lancet, July 6, 1833.

* Ibid. † Ibid. ‡ Ibid.

in Aldersgate-Street may at any time be purchased by the highest bidder. It is true, indeed, that the former of the publications just mentioned, *after the mischief was done*, hastened to eat up his words—railed in good set terms against the Governors—and sounded, in his loudest tones, the praises of the medical men for resigning the places which it was previously insinuated they had obtained by "lying and intrigue;"—and libelled, in his most rancorous revilings, the "cut-throat" candidates for the vacant places! But to what avail this sudden recantation? the above quotations are damning proofs against the *Lancet*, which no railing can efface—no *after-passages* undo.

The extent to which this steady, persevering, unmeasured system of slandering the profession, has lowered the medical body in the public estimation, it is of course impossible to calculate; but that its tendency has been to produce this effect, no person endowed with common penetration can fail to perceive. And such being the case, we can only add, that they who to gratify some petty vanity or interest of their own have given their support to a publication in which malice stands, bare and hideous, the still conspicuous and glaring motive of animosities the most rancorous, and personalities the most degrading to literature and to science—such persons, we say, *are* TRAITORS *to their profession*, and abettors of a system of moral debasement, which has no counterpart but in the mind whose fiendlike workings it pourtrays.

PUBLIC PROFESSIONAL MEETING.

A MEETING of the profession was held at the Freemasons' Tavern on Saturday last, (Dr. Elliotson in the chair,) on the subject of the dispute between the Governors and the Medical Officers of the Aldersgate-street Dispensary. The room was thronged, but we regret to say that very few persons of influence in the profession were present. It was therefore determined that the resolutions which we subjoin should be sent to the different medical booksellers, in order to procure signatures.

RESOLUTIONS *passed at a* GENERAL MEETING *of the* MEDICAL PROFESSION, *held at the Freemasons' Tavern, Saturday, October* 12, 1833.

First.—That it appears to the meeting, that in all establishments for the charitable supply to the poor of medical and surgical aid, it is highly discreditable to the character of such institutions, and detrimental to the real interest of the poor themselves, that the medical and surgical officers should be subject to laws that might even by possibility render them places of purchase and pecuniary contest.

Second.—That the cordial thanks of the profession are most justly due to Doctors BIRKBECK, CLUTTERBUCK, LAMBE, and ROBERTS, and to Messrs. SALMON and COULSON, the late physicians and surgeons to the General Dispensary, for their honourable and independent conduct in resigning their appointments rather than sanction the introduction of a law involving the obnoxious principle condemned by the previous resolution.

Third.—That the various members of the Medical Profession residing in and near the metropolis, are hereby requested to affix their Names and places of Abode to the foregoing resolution; and that books, with the resolutions transcribed, will be opened at Messrs. Cox's, Highley's, Renshaw & Rush's, and Wilson's (Princes-Street, Soho.)*

CLINICAL LECTURE
ON
DISEASES OF THE TESTICLE,

Delivered at St. George's Hospital, Oct. 8, 1833,

BY B. C. BRODIE, ESQ. F.R.S.

GENTLEMEN,—In this lecture, and in those which immediately follow, it is my intention to make some observations on the diseases of the testicle; abandoning the usual form of a clinical discourse, and not with reference to any particular case at present in the hospital. I am led to call your attention to this subject because

* An account of other meetings will be found at pages 94 and 95.

it is one of great interest in surgery, and because, so far as I know, there is no publication which brings the different parts of it properly before you, in such a manner as would enable you to become masters of the information which practical surgeons possess respecting it.

HYDROCELE.

I shall speak to you first concerning that disease to which we give the name of *hydrocele*—a bag of watery fluid connected with the testicle; not fluid in the cellular membrane of the scrotum, but a collection of fluid in a distinct cavity.

Varieties.—The most common variety of hydrocele is that in which the fluid is contained in the *tunica vaginalis*. There is another variety in which it is found in a separate cyst, and which we call *encysted* hydrocele. This latter species is divided again, as I will explain by and by, into that belonging to the epididymis, or testicle, and that belonging to the spermatic cord.

Causes.—The *tunica vaginalis*, under natural circumstances, secretes a small quantity of fluid, or perhaps aqueous vapour, just enough to lubricate the surface, similar to that which is secreted by the serous membrane, lining the internal parts of the body. But it sometimes happens that the fluid is secreted in such abundance that the absorbents are unable to carry off the whole of it. It then gradually becomes accumulated in larger and larger quantity, until at last it forms a tumor of considerable magnitude: and this takes place without any disease of the testicle. Nor is there usually any alteration in the structure of the *tunica vaginalis* itself. In the advanced stage of the disease, however, it becomes somewhat thickened, apparently in consequence of the long-continued pressure of the fluid with which it is distended. The cellular membrane external to the *tunica vaginalis* becomes thickened and condensed also. It is converted into a kind of laminated fascia, similar to that which you find on the surface of an old hernia; and over this you find the fibres of the *cremaster* muscle much increased in size. The cremaster muscle supports the weight of the hydrocele as well as that of the testicle, and all muscles become stronger and larger in proportion as they are called upon to make greater exertions.

In a few instances, even when the hydrocele is small, the *tunica vaginalis* is thickened, and you find, on dissection, the inner surface presenting a slightly honeycombed appearance. In all probability, in such cases the hydrocele originated in inflammation; and where an accurate history of the early symptoms can be procured, it tends to confirm this supposition. This preparation [presenting it] affords an example of what I have now mentioned.

I say that under ordinary circumstances the testicle is healthy, but in some cases you find hydrocele complicated with diseased testicle; examples of which complication are on the table. These collections of fluid which take place in connexion with disease of the testicle, are to be distinguished from the true hydrocele. Here there is local cause of irritation: the tumor of the testicle keeps up an increased secretion of fluid from the inner surface of the *tunica vaginalis*, just in the same manner as a solid tumor of any kind, projecting into the cavity of the abdomen, may lay the foundation of one kind of ascites or peritonæal dropsy, or as a medullary tumor of the lung, projecting into the cavity of the chest, may produce hydrothorax.

Congenital hydrocele.—Hydrocele may occur at any time of life. Sometimes it is congenital. In general the hydrocele of young children takes place after the neck of the *tunica vaginalis* has become obliterated; and then the cavity of the hydrocele has no communication with that of the abdomen. In other cases it occurs before the obliteration is completed; and then there is a narrow opening, making a communication between the cavity of the *tunica vaginalis* and that of the peritonæum. When the child is laid on his back, in a little time the fluid, following the impulse of gravity, leaves the tunica vaginalis and enters the belly; and then, when the child sits up, it descends so as to occupy its former place in the tunica vaginalis. In these cases, pressure on the hydrocele will cause it to disappear; usually, however, it does not go up all at once, like a hernia, but recedes gradually. The opening is frequently not of greater diameter than a common probe, and the fluid takes time to be squeezed through it.

Hydrocele of Adults.—Hydrocele is not only congenital, but it occurs in boys under the age of puberty, and in men up to the latest period of life.

Sometimes the tumor increases to a certain size, and then is stationary; but more frequently it goes on increasing. The cases in which a hydrocele attains a *very* large size are rare, because it is a disease very easily relieved, and the fluid is generally drawn off long before the patient can be molested by its bulk; but if you happen to meet with a case which has been neglected—that is, where the fluid has not been drawn off—you will find that the tumor may attain any magnitude. I have seen a hydrocele hanging down to the patient's knees.

Hydrocele of the *tunica vaginalis* occasionally begins with some degree of pain

and tenderness, as if it were, in the first instance, an inflammatory disease: but such cases are rare. For the most part, the patient has no knowledge of the existence of the disease until he discovers that one testicle appears to be larger than the other. As the disease proceeds, he still suffers no inconvenience except what may be attributed to the increasing bulk of the tumor. At last it becomes visible through his dress. The skin of the penis is drawn forward into the scrotum, so that the penis is almost buried in it. The tumor is always in the way, and is liable to be ruptured by an accidental blow. When such a rupture takes place, it sometimes happens that a blood-vessel is ruptured at the same time, and the hydrocele is converted into one of hæmatocele. This complication deserves a distinct consideration, and for what I have to say on it I must refer you to a future lecture. I have known, however, even a small hydrocele to be ruptured by a very slight blow, and without any hæmorrhage. I saw a case of this kind not very long since. The fluid had escaped into the cellular membrane of the scrotum and penis. I made a few punctures with a needle, and some of the fluid made its way out, but by no means the whole of it. The absorption of the remainder took place in the course of a few days, and the tunica vaginalis being now empty, the patient thought himself cured by what he called a lucky accident; but soon afterwards the fluid became again collected, and the hydrocele was as large as ever. It was afterwards cured by an operation.

Spontaneous cure.—However, a natural cure of a hydrocele does take place in some instances. An old gentleman, who was chaplain to this hospital when I was a pupil, and, indeed, when I was first assistant surgeon, had had a hydrocele formerly, which at last attained a large size. The surgeons here at that time recommended him an operation; but he had no taste for operations, and declined their offers. At last it grew so large that he could no longer wear his small-clothes, and he went back to the old dress of a clergyman, wearing a cassock, to conceal his infirmity. When, however, he had had the disease for some years, the tumor began to disappear, and ultimately it went away entirely, so that he was never troubled with it afterwards. I every now and then see a case in which a spontaneous cure of hydrocele has occurred. You will inquire, by what process is it that a spontaneous cure is effected? I met with a case in which it took place under my own observation, so that I am enabled to answer this question. I shall explain to you hereafter, that we produce the artificial cure by exciting a slight degree of inflammation in the *tunica vaginalis*. Notwithstanding that in a few instances inflammation occurs in the beginning, and seems to lay the foundation of a hydrocele, yet, so it is, that inflammation induced artificially cures it. Well; in the case to which I have just alluded, from some accidental cause, I could not say from what, the *tunica vaginalis* became inflamed, and the accidental inflammation did that which artificial inflammation does in other cases. The patient was an elderly gentleman, with a double hydrocele—that is, one connected with each testicle. Being very infirm, he did not wish to have any operation performed beyond that of having the fluid occasionally drawn off. So he went on for some few years. At last, the fluid not having been abstracted for two or three months, he sent to me, complaining of pain and tenderness of one testicle. Notwithstanding this, I punctured the tumor and drew off some ounces of fluid, not like that of a hydrocele, but a turbid serum, such as you find effused from inflammation. The inflammation went on for a time, then subsided, and ended in a cure of the hydrocele.

What I have just mentioned reminds me that I have not explained the nature and appearance of the fluid of this kind of hydrocele. It is of an amber colour, and quite transparent. A large portion of it coagulates with heat, and on the addition of nitric acid. It resembles very nearly the serum of the blood, both in its appearance and in its chemical composition; the chief difference being that it contains rather less albumen. Every now and then you find in it a number of small greasy particles, of a yellow colour, with something like a metallic lustre. I believe that these consist of adipocire. It is an accidental circumstance, and of no consequence in practice. Adipocire is, as you will be informed elsewhere, often found in the cysts of an ovarian tumor, and in other tumors also.

Diagnosis.—The diagnosis of a hydrocele is sufficiently simple. The tumor is generally somewhat pyramidal—that is, it has the form of the *tunica vaginalis*, being somewhat broader below than it is above. The pyramidal form, however, is not constant; sometimes it is oval, perhaps in consequence of some adhesion of the *tunica vaginalis* at the upper part; or it may be of the shape of an hour-glass, there being a contraction in the centre. When this occurs, you find what appears like a circular band, which renders the *tunica vaginalis* more unyielding in the centre than elsewhere. If you draw off the fluid from one division of the hour-glass, you empty the other also, which proves that there is a communication between them. Such a

communication exists in most instances; however, every now and then you meet with a case in which the *tunica vaginalis* is completely divided into two chambers. There may be an adhesion, from previous inflammation, which thus divides it; or whatever process it may be which makes the contraction of the common hour-glass hydrocele, it may go on until it produces a complete division of the cavity. That the division of a hydrocele into two parts sometimes takes place in the last-mentioned manner, is proved by the following case. A gentleman came to me with an hour-glass hydrocele; I drew off the water from the lower part, and in doing that emptied the upper part. He came to me a year afterwards, and said that he wished to have the water drawn off again. I observed that the contraction of the hour-glass was narrower; and on drawing off the water from the lower cavity, I found that the upper one was not emptied, and I was consequently forced to puncture that afterwards; so that it was evident that what had been originally a partial contraction, in the course of a year had become a complete one.

A hydrocele may be distinguished from a hernia in the following manner. A hernia begins at the upper part, and descends towards the scrotum; whereas a hydrocele begins in the scrotum, and ascends to the groin. In a case of hydrocele there is always a space at the upper part, below the abdominal ring, where the spermatic cord is to be distinctly felt without any of the tumor lying over it; but in a case of hernia, the tumor at this part is always in connexion with the cord, and, except in some comparatively rare cases, the cord lies behind it.

Hydrocele may be distinguished from varicocele by the mere examination with the fingers. The tumor of a hydrocele presents an uniform surface; whereas, in varicocele, you may distinctly feel the curling and dilated veins. In a varicocele you can empty the vessels by the pressure of the fingers; but you cannot do this in hydrocele. In a case of varicocele, the tumor disappears when the patient lies down, which it does not in hydrocele, except, as I have mentioned, in infants where there is a congenital hydrocele communicating with the belly.

You are more likely to confound a hydrocele with disease of the testicle than with either a hernia or a varicocele. You may, indeed, at once distinguish it from inflammation, by the absence of pain or tenderness, and by the greater hardness of an inflamed testicle. But if there be fungus hæmatodes of the testicle, or any other morbid alteration of the organ, there may be no pain, and then one of these diagnostic marks is wanting. A medullary tumor, or fungus hæmatodes, of the testicle, is sometimes so elastic, that you can scarcely persuade yourself that it does not contain fluid; and thus is liable to be mistaken for a hydrocele. Probably, when such a mistake has been made, there has been generally some haste and carelessness on the part of the surgeon. Nevertheless, I have known it to be made by some very cautious and experienced surgeons; and we must not, therefore, venture to say, that a careful observation is not necessary, in some instances, in order to make a correct diagnosis. A hydrocele, then, presents an uniform surface to the fingers, whereas when there is a medullary tumor of the testicle, or any other morbid alteration in the structure of that organ, the surface is never so uniform. A hydrocele is elastic every where; but when there is medullary disease of the testicle, you feel something like fluctuation in one part; while in another part you find the tumor to be hard, solid, and presenting nothing like the feeling of fluid to the fingers.

A surgeon of great repute, whose lectures I attended formerly, used to tell us that we ought to be ashamed of ourselves if we ever condescended, in a case of hydrocele, to resort to the old method of placing a candle behind it, to ascertain whether the tumor was transparent. But I have known this very surgeon to mistake a medullary disease of the testicle for a hydrocele more than once, which he would not have done if he had had recourse to the mode of examination to which he objected. For my own part, I frequently subject a hydrocele to this mode of examination. Independently of the advantage to be derived from it where there is any question between the existence of a hydrocele or a medullary tumor, there is another reason for having recourse to it. It is important, before you operate for hydrocele, to know exactly the situation of the testicle. It generally is found at the back part of the *tunica vaginalis*, but not always; for sometimes it will have contracted adhesions to the upper part, sometimes to the fore part; and if you examine the tumor with a candle, you directly ascertain its exact position, the fluid of the hydrocele being transparent, and the testicle being opaque.

Treatment.—There are two methods of treating hydrocele, one of which we call a *palliative* mode of treatment, which cures it *pro tempore* only; while the other is intended to produce a *permanent* cure. We introduce a small trochar, or we make a puncture with the lancet. If we employ a trochar, we draw off the fluid through a canula; or if we use the lancet, we intro-

duce a small director through the aperture, to direct the fluid outwards, otherwise it pervades the cellular membrane instead of passing out through the external wound. In one or other of these ways you may draw off the fluid of a hydrocele, and the tumor disappearing, the patient appears to be well. But in a little time the fluid becomes collected again; and in less than twelve months the operation requires to be repeated.

In the great majority of cases it is very desirable to obtain a permanent cure of the disease; and in children it may generally be effected by very simple means. A stimulating lotion, composed of muriate of ammonia, say one ounce, distilled vinegar four ounces, water four ounces; a lotion of this kind, or something like it, applied by means of compresses to the hydrocele, and kept constantly applied, will cure the disease in children in nine cases out of ten; but in the tenth case something more may be wanted. This application, however, which succeeds so frequently in children, very seldom succeeds in adults. I say *very seldom*, for indeed it does succeed in them in some instances; but where it would prove successful once in the adult, I should think it would fail twenty times.

Different methods have been proposed for curing a hydrocele, which cannot be remedied by such simple means as I have just stated. The method which we commonly employ is this:—We introduce a trochar with a silver canula, draw off the fluid; and then, by means of an elastic gum bottle with a stop-cock adapted to it, we inject some stimulating liquid into the cavity of the *tunica vaginalis*. Different surgeons employ different stimulating liquids. Some use a solution of alum, others one of sulphate of zinc, and others port wine and water. I always employ the same thing, viz. equal parts of port wine and water. I do not suppose it matters which you use, but I advise you always to employ the same kind of injection, because you can then judge more exactly of the effect which it ought to produce at the time of the operation, in order that a cure should follow. You inject port wine and water, but take care not to distend the *tunica vaginalis* quite as much as it was distended before, lest some of the fluid should escape into the cellular membrane of the scrotum. I have known three or four instances in which, in this or in some other way, the fluid has escaped, producing immediate inflammation and sloughing, and requiring extensive scarifications, to save the patient's life. With care, however, there is no danger whatever of this accident. The fluid should be kept in the cavity of the *tunica vaginalis* for a certain time—on an average about six or eight minutes; but sometimes, where it produces no pain, it may be retained a quarter of an hour; in other cases, on the contrary, where it induces great immediate pain, it may be let out in half a minute.

The injection of the fluid in the first instance occasions a sickening pain, from pressure on the testicle; that goes off in a little time, and then another pain takes place, extending from the spermatic cord to the loins; and when this occurs you ought to let out the fluid. You then put on a suspensory bandage, to keep the testicle supported, and let the patient go back to bed. I would not advise you to allow him to be walking about, or moving from one room to another, for the first two or three days, because this might bring on more inflammation than was wanted. In our profession it is right to be prudent, even in what may be regarded as little matters. One inconvenience, at any rate, is the consequence of the patient exerting himself too soon, or too much, after the operation, namely, that a longer time elapses before the fluid effused from inflammation becomes absorbed, so that he may regard the cure as being completed. The effect of the operation is to produce inflammation in the surface of the *tunica vaginalis*; it is attended usually with no disturbance of the system, but with some degree of pain and tenderness of the part, and with some swelling. The swelling arises from serum effused into the cavity of the *tunica vaginalis*, as serum is effused in consequence of inflammation of the peritoneum, pericardium, or any other serous membrane.

You should always apprise the patient that he will have a return of the swelling after the operation, which will be only temporary; otherwise, when the swelling comes on, in consequence of the inflammation, he thinks that there is a return of the disease, and is disappointed. The fluid thus effused from inflammation will sometimes be absorbed in a fortnight, but more frequently a month, and sometimes even three months, will be required for it completely to disappear. Not unfrequently the fluid will remain after the pain and tenderness have entirely ceased, and yet be absorbed at last. The operation *seldom* fails in making an ultimate cure. I will not say that it *never* fails, because I should think it may once in twenty or twenty-five times; not oftener.

How does this operation effect a cure? In some instances, where an opportunity has occurred of examining the parts in the dead body, the opposite surfaces of the *tunica vaginalis* have been found adhering to one another; and trusting to such cases alone, we might say it is plain that the

operation produces inflammation; that the inflammation causes adhesion of the *tunica vaginalis*, and the obliteration of its cavity; and that thus a cure is effected. It used to be supposed that the cure was always accomplished by this adhesion; but later observations have shewn that it is not, and that sometimes the adhesions are only partial, or even that there is no adhesion at all, and still there is a cure. We are, therefore, driven to the supposition, that the inflammation merely produces an alteration in the state of the secreting vessels, so that they do not go on secreting fluid as they did before.

Generally, when a hydrocele has been cured by this method, the cure is permanent. I do not mean for a year or two, but for ever. There are, however, exceptions to this rule: I have known the cure to have been temporary, and the hydrocele to have returned after the lapse of many years. A gentleman had the operation performed by Sir Everard Home: he was cured for seventeen years, and then the disease returned: and I remember many years ago accompanying Sir Everard Home to inject the *tunica vaginalis* the second time. A gentleman came to me this last summer with a hydrocele, in which I could not avoid remarking the extreme thickness of the *tunica vaginalis*. I never met with one so thick and firm before. I was compelled to examine it very carefully before I could satisfy myself that it was really a case of hydrocele. Afterwards, on inquiring into the history of it, the patient told me that he had had a hydrocele twenty years ago; that Sir Everard Home had then injected it, and that he had continued well until within a few months of the time of my seeing him. He could not at this time stay in London to have the injection repeated; but I drew off the fluid, and I found the testicle healthy; but the *tunica vaginalis*, and the cellular membrane over it, were exceedingly condensed and thickened.

There seems to be no better method of explaining the cure by injection than that of supposing that the inflammation which it produces in the *tunica vaginalis* alters the action of the secreting vessels. Yet it is astonishing what a slight degree of inflammation is sufficient to produce a cure. I operated on a gentleman for hydrocele, and injected it, without causing any pain. I kept the fluid in for ten or twelve minutes, but still he had no pain, and there was not a single mark of inflammation afterwards, except the slightest possible degree of tenderness of the testicle; just enough to make him say that he felt pressure on it more than on the other testicle. There was scarcely any perceptible swelling, and yet this patient obtained a cure. Thus a cure may take place where there is a very small degree of inflammation; and on the other hand, I can mention to you some other facts which prove that a great degree of inflammation will by no means ensure the patient's cure. In short, it appears that the chance of a cure is not in proportion to the quantity of inflammation. A gentleman had a hydrocele: a surgeon drew off the water, and injected it, and a good deal of inflammation followed; but the hydrocele returned. He consulted me two or three years afterwards; I repeated the operation, very considerable inflammation followed, but there was no cure; and I was forced to effect it by another operation, which I shall mention to you presently. There was a gentleman, a captain in the navy, who laboured under hydrocele. He consulted the surgeon of his ship about it, and he injected it, and I dare say performed the operation very properly; but no cure followed. The captain came to London, and consulted an eminent hospital surgeon, who injected the hydrocele a second time; a good deal of inflammation supervened; but the second operation was as unsuccessful as the first. He consulted then another eminent surgeon in London, who, in order that he might be quite sure of making a cure, injected equal parts, not of port wine and water, but of port wine and brandy. A very violent inflammation followed this injection; nevertheless, the patient came to me a year afterwards with the hydrocele in its original state. He was at last cured by other means.

The inflammation which follows the operation may be slight or severe; and in the latter case, it will every now and then go on to suppuration, an abscess being formed in the cavity of the *tunica vaginalis*. I have never known this to happen after the operation by injection, except in West Indians, and in them only in three out of a great number of cases; for West Indians are remarkably liable to this disease; and a great many come to this country to have it cured. In the cases to which I allude, the injected fluid was not made stronger than usual, and it was kept in a shorter time than usual; in one case only a single minute; and yet the inflammation went on till it became excessive: there was violent pain, a great degree of constitutional disturbance, the patient was altogether in a state of considerable suffering, until, after a few days, an opening was made in the *tunica vaginalis* with a lancet, and there rushed out a quantity of pus. The patient's sufferings were now at an end, the pus ceased to be secreted, and the *tunica vaginalis* contracted, and the patient in each of these cases was cured.

I would advise you, as a general rule, to

use the operation by injection; for, of the others which have been invented, according to my experience, none are to be compared with it, either as to the certainty or facility of cure. However, when this fails, you must resort to some other method, and therefore it is our business to consider what other operations have been proposed for hydrocele.

Mr. Pott proposed to treat a hydrocele by passing a seton through the tumor. The seton being a foreign body, excites inflammation of the *tunica vaginalis*, so that the principle is the same as that of the operation by injection. I have performed this operation, but it is a long while ago, and I preserved no notes of the case, so that I am afraid to speak of the results of my own practice. I know, however, that it failed in one case; and I believe it succeeded very well in another. I am speaking of adult patients. It seems an operation remarkably well suited to young children, where an operation is really required,—a circumstance of rare occurrence. I have heard of some surgeons, whose judgments I respect, and who have a high opinion of this operation even in adults; and I have no right to contradict them. The operation by injection, however, is undoubtedly much preferable to it. The seton should be used only where the injection has failed.

Another operation was that of applying caustic potash, so as to make a slough extending through the scrotum and through the *tunica vaginalis*. When the slough separates, the cavity of the *tunica vaginalis* becomes exposed, the water escapes, and by degrees the *tunica vaginalis* contracts, the slight inflammation produced by the caustic potash being sufficient to cure the hydrocele. I have performed this operation in two or three instances; but I must say from what I have seen, that it is an operation not to be put in comparison with that by injection, and I would advise you not to have recourse to it.

The operation most commonly performed before that of injection was introduced into this country, was the one I am going to describe. It was called the operation *by incision*. An incision is made into the cavity of the *tunica vaginalis*, which gives exit to the fluid; then the inner surface of the membrane is to be dressed with lint, or sprinkled with flour, or some other foreign body is to be introduced, which will bring on inflammation and suppuration. This operation is a very certain and effectual method of curing hydrocele: it makes the inner surface of the *tunica vaginalis* granulate, and I suppose ultimately terminates in an obliteration of the cavity. I have performed this operation in several instances; but I have resorted to it only where the operation by injection had previously failed. I do not think that it ought ever to be performed, except under these circumstances. I cannot say of this what may be said of the operation by injection—that it is a mild method of treatment, producing but little inconvenience to the patient. The fact is, the operation by incision is very severe; and in every case in which I have either performed it myself, or seen it performed by others, it has been followed not only by much local inflammation, extending to the cellular membrane and scrotum, to which parts the inflammation never extends after injection, but by a great deal of constitutional disturbance. There is always a frequent and strong pulse, a hot skin, and in many instances a flushed countenance, a good deal of pain in the head, and an evident determination of blood to the brain, so that I have been under the necessity of bleeding the patient. I cannot say that I have ever known a case in which these symptoms did not readily subside under a proper treatment; but I can readily believe what I have been formerly told by older surgeons, who remembered the time when the operation was commonly performed, that it was actually attended with some degree of danger. It is undoubtedly an operation which ought not to be indiscriminately performed.

We must leave the subject of Encysted Hydrocele to the next lecture.

NOTTINGHAM ADDRESS

TO THE LATE

MEDICAL OFFICERS OF THE GENERAL DISPENSARY.

To the Editor of the Medical Gazette.

Sir,

You will perceive by the accompanying resolutions and address, that the practitioners of this town have almost unanimously (I believe I may say with one exception) approved of the high-spirited conduct of the medical men who lately resigned their situations at the Aldersgate-street Dispensary. I am requested to transmit to you the account of the resolutions, and a copy of the address, which are sent not doubting you will do us all the favour to insert them in your Gazette.

I have the honour to remain, sir,

Your obedient servant,

J. C. Williams.

At a meeting of the medical practitioners of Nottingham, held in the Exchange Hall, pursuant to requisition,—Dr. Marsden in the chair,—the following resolutions were unanimously adopted:—

Moved by Dr. Pigot, seconded by Mr. Watts—

1. That this meeting does most highly approve of the conduct of the medical officers of the Aldersgate-street Dispensary, in resigning their situations when they could no longer hold them with honour to themselves.

Moved by Dr. J. C. Williams, seconded by Mr. R. Davison—

2. That the following address be presented to the late medical officers of the above institution, expressive of the high sense of their conduct entertained by the medical practitioners of this town.

3. That copies of the resolutions, and of the address, be transmitted to the editors of the Medical Gazette and Lancet.

4. That the thanks of this meeting be given to the Mayor, for his kind permission to use the Exchange Hall.

5. That the thanks of the meeting be presented to Dr. Marsden, for so promptly calling this meeting, and for his able conduct in the chair.

To the late Medical Officers of the Aldersgate-street Dispensary, London.

Gentlemen,—We hasten to address you, to record our high sense of admiration at your conduct, in resigning your situations at the Aldersgate-street Dispensary. We cannot sufficiently admire, we cannot sufficiently approve, we can scarcely find language sufficiently energetic to convey to you those sentiments of esteem and of gratitude which pervade our breasts, when we reflect upon the noble stand you have made, on honour and principle, against the short-sighted and debasing attempt to open the appointments at public charities to the highest bidder.

Gentlemen, we thank you. We cannot sufficiently deprecate the attempt, which would be the means of enabling men of the lowest reputation in our profession—*the mere traders in physic*—to place themselves in public situations by the force of money, keeping out by so doing those high-minded, honourable, and talented individuals, whose moral worth and humane characters must be a guarantee of their kind attentions to the poor, and whose objects in seeking such situations will be to extend their usefulness to their fellow-creatures.

Gentlemen, such usefulness has been your object in your late attendance at the Aldersgate-street Dispensary; and high as some of you have already enrolled your names in the temple of science, still higher have you ALL enrolled your names as examples to your medical brethren, of honour, integrity, and moral worth, as opposed to the sordid calculations of *gain*.

It seems to us, that the individuals who supported the unwise and degrading proposition viewed their subscriptions as superior to the time, industry, and talent, given by the medical officers to the poor of the charity. We are ashamed even to entertain such an idea. Where there is disease and penury, there, patiently, laboriously, and unostentatiously, is the medical man found alleviating suffering and distress; and even when pestilence walketh abroad, fearlessly does the medical man seek the abode of poverty, risking his own life, and the support he is to his own family, to save the life of the poorest of his fellow-creatures.

It is high time that the services of medical men to public charities are viewed in a proper light, and that, instead of considering these gentlemen as the mere instruments of the benevolence of subscribers, it is steadily impressed that medical officers are the very corner-stones of charities, for without them no medical charities could exist.

Gentlemen, we have now another link in the chain of honourable medical independence; and we repeat our thanks to you most cordially, for your disinterested conduct.

Allow us to remain, gentlemen, with the greatest respect,

(Signed by) W. MARSDEN, M.D.

John Mitchell Davidson, M.D.; John Calthrop Williams, M.D.; William Valentine, F.L.S.; Joseph Thompson; Augustus Greaves; John Higginbotton; Robert Davison; John Caunt; Andrew Blake, M.D.; W. Watts; Thomas Allen; John Wright; Augustus Darby; J. N. Thompson; Jas. Butlin; F. Mann; Beckit Truman; G. M. White; Godfrey Howitt, M.D.; Booth Eddison; A. R. Sanderson; Joseph White; Thomas Beveridge; Alex. Manson, M.D.; J. Woodcock Hall; Thomas Kitelec; John Attenburrow; R. Hutchinson, M.D.; H. Oldknow; J. M. B. Pigot, M.D.; H. C. Attenburrow; William Wright.

CORK ADDRESS

To the late Medical Officers of the Aldersgate-street Dispensary, London.

GENTLEMEN,—We, the Physicians and Surgeons of the Cork General Dispensary, viewing with pleasure your manly and determined conduct, beg to offer our tribute of applause. We rejoice in the act, as the commencement of a great change. The medical profession has too long patiently submitted to the ill treatment of men who, placed in a little brief authority, have used that authority as a means of petty tyranny; and we feel that the entire body of the profession will not only approve of such conduct, but act upon it, should circumstanees render necessary such measures.

We have the honour to be, gentlemen, with sincere esteem, your obedient servants,

T. Mackey, M.D.; M. M'Namara, M.D.; John Copinger, M.D.; Timothy Lucy, M.D. W. Flemyng Porter, M.D.; Richard T. Fowler, M.D.; L. Herbert Orpen, M.D. Surgeons.

EFFECTS OF AN OBTURATOR MADE OF DIFFERENT METALS.

A LADY, under the care of MM. Nauche and Moncourier, had a great fissure in the palate, through which her food used to pass into her nostrils. A dentist very ingeniously made an obturator which remedied the accident, but caused a remarkable sensation. A metallic taste and a slight numbness were experienced, analogous to those produced by galvanic arrangements. Suspecting that this might be occasioned by the dissimilar metals employed in the composition of the instrument, MM. Nauche and Moncourier put into their patient's mouth two disks of zinc and copper soldered together: the sensation now produced was recognized as similar to that caused by the obturator, differing only in intensity. The dentist was ordered to make another instrument, all of platina—the former being of platina jointed with gold. No sensation was experienced from the new obturator. From this we may gather the necessity of making those instruments of a single metal which are intended to be left in the system. When the metals are dissimilar, an electric current will be established, giving rise to decompositions of the fluids which they touch, and to feelings which may prove very troublesome.—*Gaz. des Hôp.*

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Oct.* 15, 1833.

Abscess	3	Bowels & Stomach	5
Age and Debility	30	Brain	6
Apoplexy	9	Lungs and Pleura	5
Asthma	5	Insanity	2
Cancer	2	Jaundice	2
Childbirth	1	Liver, diseased	2
Cholera	9	Locked Jaw	1
Consumption	45	Measles	13
Convulsions	30	Mortification	9
Croup	3	Paralysis	4
Dentition or Teething	3	Rheumatism	1
Dropsy	12	Scrofula	1
Dropsy on the Brain	18	Small-Pox	4
Epilepsy	1	Sore Throat and Quinsey	1
Erysipelas	2	Spasms	1
Fever	1	Stone and Gravel	1
Fever, Scarlet	11	Thrush	2
Fever, Typhus	1	Tumor	1
Gout	1		
Heart, diseased	1	Stillborn	6
Hooping-Cough	6		
Inflammation	27		

Decrease of Burials, as compared with the preceding week . . . 16

METEOROLOGICAL JOURNAL.

Oct. 1833.	THERMOMETER.		BAROMETER.	
Thursday . 10	from 35	to 58	30·16	to 30·13
Friday . . 11	33	55	30 09	30·03
Saturday . 12	32	50	29·98	29 96
Sunday . . 13	30	51	30·01	30·07
Monday . . 14	40	59	29·57	29 40
Tuesday . . 15	43	55	29 27	29 04
Wednesday 16	39	55	29·16	29·31

Prevailing wind, S. W.

Except the 10th and 11th, generally cloudy; with frequent, and at times heavy rain.

Rain fallen, ·95 of an inch.

AURORA BOREALIS.—From half-past six on the evening of the 12th, till after midnight, the northern hemisphere was remarkably illumined to the height of 40°. About a quarter to seven, a large coruscation arose in a direction from N.E. to S.W. to within about 20° of the zenith: it then became detached from the horizon, and moved across the heavens much like a cloud strongly illumined by the setting sun, till seven; by which time, about 60° of its length had disappeared in the S.W. horizon. From this period, it increased greatly in breadth and brilliancy, and at half-past seven moved towards the place from whence it rose, till its length exceeded 90°, and so continued till nearly eight, gradually becoming fainter, till about half-past eight it disappeared. Several smaller ones were seen during the interval, moving from the N. towards the zenith.

BOOKS RECEIVED FOR REVIEW.

Surgical Essays: the result of Clinical Observations made at Guy's Hospital. By B. B. Cooper, F.R.S. &c.

Memoir on the External Division of the Sac in Strangulated Hernia. By C. A. Key, Esq. &c.

ERRATA.—In Dr. Ramsbotham's Introductory Lecture, p. 35, l. 38, *for* "Track," *read* "Irack;" p. 36, l. 46, *for* "Oman," *read* "Omar;" p. 40, l. 52, dele "natural."

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 26, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

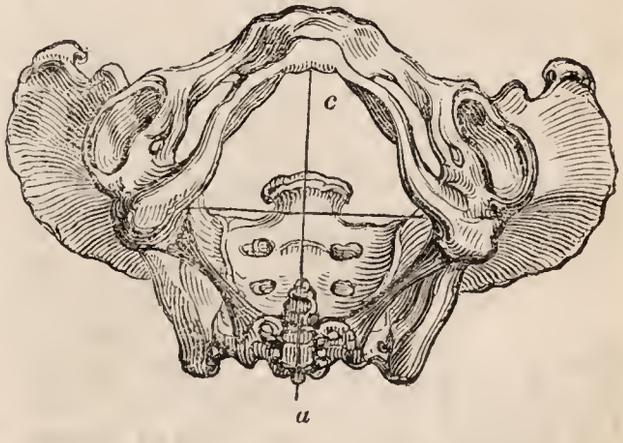
Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture III.—*THE PELVIS.*

Importance of a correct knowledge of the shape and dimensions of the pelvis.—A correct idea of the relative bearings of the pelvis, in regard to the spinal column, will not only inform us how the uterus is supported during the last months of pregnancy, but is of high value in a practical point of view, inasmuch as we are able, by keeping the observations previously made in mind, to place our patient under labour in that situation which most readily allows the descent of the child's head into the cavity of the pelvis, and also facilitates its escape externally. The position, then, of which I shall hereafter speak more fully, should be with the shoulders directed forwards, the spine bent somewhat into a curve outwards, the thighs drawn up towards the abdomen, and the legs bent back a little upon the thighs; the whole person lying on the left side (as exemplified by this phantom.) By this posture we destroy, in some degree, the natural incurvation of the spine at the lumbar vertebræ, and the consequent obliquity of the pelvic brim, and we bring the line of the trunk of the body more into the direction of the line of the pelvic entrance. We cannot bend the body so completely as to throw the axis of the superior aperture into a *straight* line with that of the trunk, but we may approximate the two axes near to each other. Of equal, and even greater, importance is it for us to possess an accurate knowlege of the dimensions and shape of the pelvis. I shall therefore be excused if I here recapitulate briefly what I had the honour to lay down at our last meeting—viz. that the female pelvis is divided into brim, cavity, and outlet; that the brim has a long and short diameter, so also has the outlet; that the long diameter of the brim measures about five inches from side to side, and the short diameter about four inches from the front to the back part; that the dimensions of the outlet are the same, although, in position, the diameters are reversed; that the long diameter of the outlet is from the fore to the back part when the os coccygis is pressed back, and measures nearly five inches, and sometimes even more—depending a good deal upon the mobility of the bone; and that the short diameter is from side to side, and is about four inches, perhaps a trifle less.

The Outlet of the Pelvis.



References.—*a*, The point of the coccyx; the end of the line shews the extent to which it is frequently pressed back in labour. *c*, The under edge of the symphysis pubis.

You will recollect the general figure of the pelvis: that it is deep behind and shallow in front, possessing, from the point of the os coccygis to the promontory of the sacrum, a depth of about five inches and

a half or six inches; behind the symphysis pubis, an inch and a quarter or an inch and a half; and from the tuberosity of the ischium up to the brim, about three inches and a half. You will bear in mind also, that the perfection of the oval at the brim is broken by the promontory of the sacrum, which dips forward over the superior aperture.

Let us now adapt this knowledge to practical purposes. It occasionally happens, that even when the head presents, it offers itself not in the most favourable situation for its descent through the brim. We shall find that the natural inclination of the head, at the commencement of labour, is with the face to one side and the occiput to the other; but it is sometimes so placed that the face looks forwards, with the brow resting above the symphysis pubis, or backward, directly against the promontory of the sacrum. These are unfortunate situations; a head of a common size cannot thus enter a common-sized pelvis; a change in its position must therefore take place, either effected by nature or by the hand of the attendant. You see, in the specimen before me, how easily the head enters the brim when the face lies laterally, and how impossible it would be even to *force* it through when the forehead impinges either on the promontory of the sacrum or the symphysis pubis. Besides, not only in head presentations shall we find a correct idea of these dimensions highly valuable to us, but such is particularly the case in those instances when it is necessary for us to *turn* the child, as also indeed under common breech presentations.

We shall hereafter find, that in breech or footling presentations, or when a case has been made one of the footling kind by the operation of *turning*, some little assistance is often required, on the part of the obstetrician, to facilitate the extrication of the shoulders and head; and although I wish to lay it down distinctly, as an axiom thus early in the course, that all uncessary interference under labour must be injurious, still there are instances (and they are both frequent and various) in which the attendant may adminster most essential aid.

Presuming, then, that some delay occurs in the descent of the head after the shoulders have passed the brim, either from the pelvis being rather smaller than natural, or from a want of sufficiently powerful uterine action, and some extractive efforts are required to terminate the labour—if we have been careless in making ourselves acquainted with the shape and dimensions of the brim, or have not thought it worth while to retain *such trifles* in our memory, we shall see what injury may be done. We may bring the head to the brim of the pelvis, with the face looking either towards the promontory of the sacrum or towards the symphysis pubis; and under such misdirected efforts we may use as much force as we possess—we may tire ourselves with the exertion which we make — nay, we may actually separate the child's head from its body — drag away the body, and leave the head *in utero* — and yet not accomplish the purpose we intend. Let us, then, remember correctly the form of the brim of the pelvis—let us place the head with the face to one side and the occiput to the other, and then it will descend with comparative ease.

Again: it is not of less consequence that we should recollect, in such a case, the formation of the cavity and the diameters of the outlet. If, for instance, we do not bear in mind that the axis of the superior and that of the inferior apertures are in a different direction—that the axis of the entrance is downwards and backwards, while that of the outlet is downwards and forwards—and endeavour to bring the head through the brim by drawing the side of the neck under the pubis—we shall most likely fail in our object of delivery. But if, recolleeting that the axis of the entrance is downwards and backwards, we press the neck back, so that the shoulder bears against the point of the coccyx, while the face is turned to one of the ilia, we shall then be directing the head in a line parallel with the axis of the entranee, and most probably shall accomplish what we intend. Still it remains in the pelvis; it is not extracted. If, then, forgetting that the axis of the outlet is downwards and forwards, and that the lateral is the short diameter, we attempt to extract the child after the head has passed through the brim by continuing to direct it backwards, we shall still, in all probability, be foiled. But if, on the contrary, we remember this; then, by turning the nape of the neck under the arch of the pubis, and throwing the face into the hollow of the sacrum, at the same time depressing the chin by the introduction of the finger into the fœtal mouth, we shall be using our utmost means (and that most scientifically) for the purpose of completing the labour, so far as the birth of the child is concerned.

Shape and dimensions of the fœtal head. — We shall now proceed to the consideration of the head of the fœtus; and as we have already described both the brim and the outlet of the pelvis to be somewhat oval, we must observe that the same configuration is apparent in the head of the child—that it is, indeed, an oval shape, having, therefore, a long and a short diameter; the long diameter being from the forehead to the occiput, and the short diameter

from the tuberosity of one parietal bone to that of the other.

In extent, these diameters are, from the forehead to the occiput, about four inches and a half; and from the tuberosity of one parietal bone to that of the other, about three inches and a half. I do not mean to say that these measurements are exact, any more than that the measurements I have given regarding the pelvis are always the same; but as I have told you that we take a fancied standard pelvis, so we also take a fancied standard head—such an one as we most commonly meet with. I shall not give you any other dimensions of the head except one, because that would tend rather to distract your attention than otherwise: I allude to the space between the vertex and chin obliquely, and this measures, in a common-sized child's head, about five inches and a half. In consequence, however, of the compression of the bones under labour, this diameter is generally somewhat increased, and occasionally will approach seven inches, and even exceed it. The long diameter of the child's head, from the forehead to the occiput, being four inches and a half, and from side to side three inches and a half, you will see that we have a clear space of about half an inch in a common-sized pelvis, between the cranial and the pelvic bones, when the head is properly placed, both in the lateral and conjugate diameters; which is quite sufficient generally for the easy passage of the child's head.

General anatomical character of the fœtal head.—It is necessary also that we should pay some attention to the general anatomical character, as well as to the form and size, of the child's head. We observe that the fœtal head, at birth, is not as the adult head appears to be—one continuation of solid bone. I say as the adult head *appears* to be, because we know that, in reality, it is not; but looking at the skull externally, especially in an old person, without taking it to pieces, we should apprehend that it was one solid piece of bone: but very different is the head of the fœtus, even when regarded externally; for we there immediately observe that it is formed of a number of bones, which are divided from each other by intervening lines and spaces. These lines and spaces are membranous, and have obtained the name of *sutures* and *fontanelles*. The lines are termed sutures, from the Latin; the spaces, fontanelles, from the French; or βρεγματα, after the Greek. The term fontanelle was adopted because it was supposed that a humour distilled from the brain through these unossified apertures.

The bones that we have to take notice of obstetrically, in the skull of the child, are but few: the two *parietal* bones, of a square shape, which form the principal bulk of the child's head laterally; the *frontal* bone anteriorly (or rather the frontal bones, because there are two in the fœtus); and the *occipital* bone posteriorly. The parietal bones are separated from the frontal, or connected with them, by a suture called *coronal*; which runs from the external angle of one eye, to the same point on the opposite side of the head, along the upper part of the forehead. It is called "coronal," because it was on that part of the head that the ancients used to wear their coronæ, or garlands. The parietal bones are separated from the occipital bone by a suture termed *lambdoidal*, from its resemblance to the Greek capital Λ. The two parietal bones are separated from each other by the *sagittal* suture, which runs longitudinally along the middle of the head; so called because it was supposed to be situated between the lambdoidal and coronal sutures, as an arrow is placed in a strung bow. There is still another suture to be considered, which becomes obliterated earlier in life than those just spoken of—the *frontal* suture. It divides the frontal bone into two pieces, and runs directly upwards from the root of the nose. I shall say nothing of the other sutures of the head, because they are almost entirely out of the way of our obstetrical observation.

Well, then, there are two fontanelles which we have still to describe, and these are placed at each extremity of the sagittal suture; we have an anterior and a posterior fontanelle, and it is of paramount importance that we should know their situation and form. The anterior fontanelle is large and quadrangular, or diamond-shaped, and is, generally speaking, in a fœtus at full time, sufficiently large to take in the whole extremity of the finger; it can scarcely be covered by it. On the contrary, the posterior fontanelle is small and triangular. The peculiar form of the anterior fontanelle is caused by the junction of the corners of four bones, the two parietal and the two frontal; the posterior is formed as a triangle, by the union of three bones, the superior posterior angles of the parietal bones, and the upper angle of the occipital bone.

Necessity of learning the form and situation of the two fontanelles.—Of what use, then, is it to acquire a proper knowledge of the shape of these fontanelles, and their situation? We shall hereafter mention, that the natural position of the head is, with the vertex as the presenting part, or that which first offers itself to the finger in examination. The vertex is generally described as being over, but, in fact, it is placed rather before, the posterior fontanelle. If, then, under an obstetrical examination, we distinguish the posterior fontanelle readily, we know that the vertex is presenting; we expect, therefore,

that the fœtus offers itself in the most favourable position, and we augur, *cæteris paribus*, an easy termination of the labour. If, on the contrary, we distinctly feel at once the large open space—the anterior fontanelle—we know then that the brow, or the upper part of the head, is downward; we immediately recollect that that is not the most fortunate situation for the child's extrication, and we make up our minds, therefore, for a lingering case, or at least a more lingering one than if the head had presented, with the vertex depending; we may perhaps even think ourselves justified in trying to place it in a more favourable state. It is a matter of great moment that these points should be carefully attended to.

Advantage of the peculiar structure of the fœtal head.—Now both physiologically, and particularly obstetrically, we find that this peculiar conformation of the fœtal skull is of the highest possible advantage; that it is a most wise provision of nature, because, on the one hand, it allows the brain in after life to be gradually developed, probably more completely and uniformly than could have taken place had the head been formed of one entire case; and, on the other hand, a certain degree of compression is allowed—each bone is permitted to ride a little over its neighbour,—the capacity of the child's head, therefore, is diminished—and it is capable of being propelled through a smaller space than if it had been formed of one continuous piece. This power of diminution is greatest in the lateral diameter; and a full-grown head may be diminished from side to side, without endangering the child's life, one-seventh of its whole extent, or from three inches and a half to three inches. Every one at all engaged in obstetrical practice must be aware, that this overlapping of the bones is a very frequent occurrence; and it cannot be too strongly impressed upon the mind, because I myself have known many heads squeezed through a pelvis, which, twelve hours before, it was believed were too large to pass, and the result has been a favourable termination of the case. In consequence, then, of this compressibility of the child's head, we should hesitate a long while, and consider the subject well, before we take in hand an obstetrical instrument, especially such a one as cannot be had recourse to without the sacrifice of the child's life. I am not quite sure whether another good effect is not produced by the compression suffered under labour. I suspect that, during the passage of the head through the pelvis, the child is thrown somewhat into a state of torpor, and that such a state may be advantageous, inasmuch as it may prevent its injuring the mother by its motion during its transit. This I only throw out as a hint; I cannot assert that it is the case.

Expulsion of the fœtal head vertically.—Having made ourselves acquainted with the form of the child's head, with its size and structure, it naturally occurs that we should next show the mode in which it is expelled, at least, take a general view of the process of its expulsion vertically.

The head, then, descends into the pelvis with the face to one side, and the occiput to the other, the vertex being the depending part. This is not the case invariably, but it is the most natural way in which the child offers itself. Having passed the brim and fully occupied the cavity, its forehead and occiput rest on the internal surfaces of the tuberosities of the ischia. Since, however, whilst it remains in this position, its long diameter is opposed to the short diameter of the outlet—since the tuberosities of the ischia are unyielding—and since the diameter of the head, so placed, exceeds that of the outlet by half an inch, it is evident that it must effect a turn before it can be expelled. Such a change, therefore, does actually occur, and the face is directed into the hollow of the sacrum, while the occiput peeps out under the arch of the pubis.

When I use the words, "effect a turn," I beg I may not be misunderstood; I do not mean to say that the child uses any power of its own—that it makes a voluntary effort to perform this slight revolution; but the action is perfectly mechanical. It is mechanical, in consequence of the impediment met with below resisting the efforts at expulsion exerted from above. It has been thought that the child, by its own struggles, advanced itself through the passage; and the ancients were strongly impressed with this idea. We shall see good reason hereafter entirely to discard that opinion.

Importance of discriminating between a male and female pelvis and skeleton.—Now it is of no slight consequence, that we should be capable of distinguishing a male from a female pelvis, as also a male from a female skeleton. It frequently happens that in this country, as well as in others, skeletons are dug up in unusual situations; a suspicion of murder may, perhaps, be excited, and it is possible that a person in the immediate neighbourhood, or near to it, may have been missing some years before. A medical man will then be called upon to give an opinion as to whether certain bones which have been found belonged to a female or to a male subject; and it is to the pelvis that we particularly direct our attention in clearing up this question.

We cannot help immediately perceiving, when we view the male and female pelvis together, that there is a considerable dif-

ferenee in the general eonformation of this organ in the two sexes. We eannot help observing that the pelvis of the female is altogether more elegantly shaped than the pelvis of the male; that the alæ of the ilia spread themselves wider laterally, and do not rise so perpendicularly. We eannot help remarking also, that there is a eonsiderable difference in the formation of all its parts. In females the brim is wider from side to side than in the eonjugate diameter, whereas in males it is just the reverse. The cavity also is considerably more capacious in the female than in the male subject; and this is particularly owing to the hollow of the saerum being not so straight, but possessing more of a curve; it is also owing to a circumstance which tends at the same time to enlarge the outlet of the pelvis, viz. the extent at which the tuberosities of the ischia are placed from each other. In the male pelvis before me, I presume the distanee is little more than three inches, whereas in the female it is generally four. At the outlet, likewise, we perceive a eonsiderable difference in the arch of the pubes. This part is formed more angularly in the male than in the female; indeed, the arch of the female pelvis approaches nearer to the perfeetion of an areh; and this eireumstanee is partly owing to its being wider at its base, but particularly to the internal edges of the rami of the ischia, and the descending rami of the pubes, being turned a little outwards, instead of looking directly towards each other as in the male. This portion of the bones bears an appearance as if it had been formed of ductile matter, and as though the two rami had been taken hold of by the thumb and finger, or a pair of forceps, and their internal edges turned outwards. Now you will see how this conformation of the rami of the ischia and pubes enlarges the outlet of the pelvis, and, eonsequently, how mueh more space it gives for the passage of the child externally. It is, then, to the general figure of the alæ of the ilia, but particularly to the formation of the brim, the cavity, and the outlet, that we should give our attention in endeavouring to distinguish the male from the female pelvis. The bones of the male pelvis are also thicker, and more strongly marked externally, by the indentation of muscles. It is possible that a weak effeminate male subjeet might have a pelvis not more indented than a masculine female, but I am now generalizing.

Well, then, the same remarks hold good with regard to the male and female skeleton. There is a great difference in the solidity and size of the bones, and in the indentations which they bear from the origin and insertion of muscles. But if we have an opportunity of making our observations on an articulated skeleton, or one in which the whole of the bones are preserved, and ean be put together, it is by eontrasting the pelvis with the shoulders — the lower part of the trunk with the upper, that we are able to discriminate the two sexes. In consequenee of the shoulders of the male being broader than the female, a line drawn from the aeromion perpendicularly downwards would fall outside the ala ilii; while, on the eontrary, such a line in the female subject would generally fall upon the erista of the ilium, or, indeed, it would rest somewhat within the spine, so as to impinge upon the ilium itself. It is this peculiar conformation which gives the broad shoulders to the male, and the swelling hips to the female; and it was in this peculiarity that the ancient sculptors were so happy in their delineations of the differenee between the male and female form.

Variations in the size of pelves.—It would be a very fortunate thing for women in general, if they all possessed such a pelvis as that I have deseribed to you, such as we eonsider the standard to be, in dimensions and figure; but, unfortunately, this is not the case. The pelvis is subject to a great variation, both in size and form. Perhaps no two pelves of all the specimens which have been collected exactly resemble each other in every respect, agreeing minutely in size, shape, and weight; and we have, therefore, a pelvis sometimes considerably smaller than the standard, and in other eases considerably larger; but the natural formation, be what it may, is always diminished in size if attacked by disease.

There are two diseases of the bony strueture which produce a great influence on the capaeity of this organ; these are rachitis, rickets—and mollities ossium, or malacosteon. We have upon the table many specimens of deformity. In some of these it is very slight; in others it is the greatest that has ever been known.

Deformity of the pelvis.—It is very evident that the consequenee of a deformed state of the bones under labour is, either that the child eannot escape at all, or, if it does pass, it must be by more or less exertion, and with greater or less difficulty. We may have the pelvis partially deformed, and we may have a complete distortion of the bones. What we mean by *partial* deformity is, when one of the three parts I have described—either the brim, the cavity, or the outlet—is singly the subject of derangement; and *complete*, when all these are more or less involved.

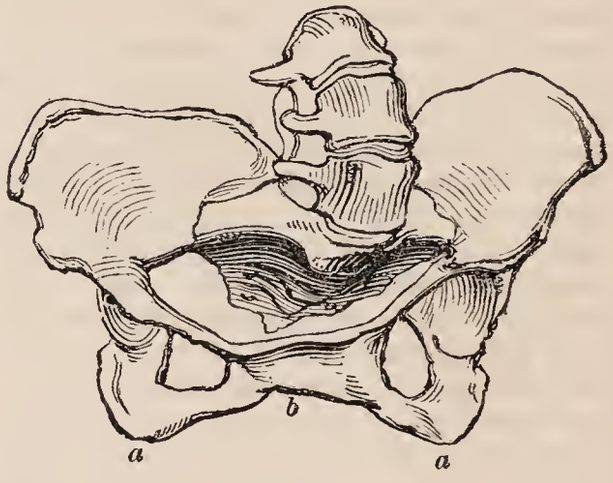
In partial deformity, we almost always find that the diminution of spaee is at the brim, in the conjugate diameter between the promontory of the sacrum and the upper part of the symphysis pubis. In the specimen I now present, there is considerable contraction at the brim; where-

as, the other parts are exceedingly well formed; so that if the child's head had passed the brim, it would most likely have been expelled very rapidly through the cavity and outlet. Occasionally, indeed, we find, that when the pelvis is partially distorted, it consists in the approximation of the tuberosities of the ischia too near to each other, which is a rare occurrence; or in the spinous processes of the ischium being too long, and jutting too much inwards, so as to entrench both on the cavity and on the outlet, which is more common: but by far the most frequent cases of partial deformity are those in which it occurs at the brim, and that in the conjugate diameter. This is easily accounted for: it is the spot on which the whole weight of the trunk rests; and if the bones are inclined to give way, it is there that they first suffer.

At other times, the whole of these three parts are affected by distortion. In the cast which I now shew you, where there is perhaps the greatest degree of deformity that has ever been known to exist, we have the promontory of the sacrum thrown inwards, the acetabula thrown backwards, and the symphysis pubis jutting forwards, so that at the brim there exists not an inch of space from the fore to the back part at any one point. The same is the case with regard to the cavity and the outlet, by the tuberosities of the ischia almost touching each other, and the throwing forward of the point of the os coccygis. Here is a pelvis [exhibiting it] which I took from a patient who died, after having been delivered by myself, and you see it does not measure more than two inches and an eighth at any one point of the brim, in the conjugate diameter. For the loan of this other pelvis I am indebted to my friend, Mr. Barlow, late of Chorley, but now of Blackburn,—the only surgeon in England who has succesfully performed, in as far as regards the preservation of the woman's life, the Cæsarean section. This pelvis (of which the annexed cut represents the figure) belonged to a woman to whom he was called in consultation under labour. He, in conjunction with other gentlemen, thought it necessary that the Cæsarean operation should be had recourse to. The woman died, and was buried, but was afterwards exhumed: the pelvis came into the possession of a friend, who gave it to Mr. Barlow, and he has very kindly lent it to me. Here, then, is not more than an inch and an eighth at any part of the conjugate diameter; and through the greatest portion of its extent, the brim does not possess more than seven-eighths of an inch. Some casts have been made of it, and I hope we shall be able to perpetuate, not only the history of the case, which has been excellently detailed by himself, but also the exact similarity of the pelvis itself. Here are other pelves on the table, all specimens of distortion in various degrees; and you cannot but shudder at the state of misery to which any woman must be reduced, who possesses a pelvis contracted to such an inveterate extent as most of those you see before you.

a a, The tuberosities of the ischia, thrown close together, the arch of the pubis almost obliterated. *b*, The symphysis pubis jutting outwards.

Here [presenting it] is a pelvis of another shape, though pretty nearly as much deformed. In the last specimen, the tuberosities of the ischia very nearly approached each other, in consequence of the acetabula being thrown back towards the posterior part of the pelvis; but here, on the contrary, you observe that the tuberosities of the ischia are wider apart from each other than they should be, and although there is but a very small space in the conjugate diameter at the brim, still there is a considerable space at the outlet. The first of these two species of deformities has obtained from Dr. Blundell the name of the *angular*, and the last of *elliptical*.



a a, The tuberosities of the ischium wider apart than natural, so that the arch of the pubis is much enlarged. *b*, The symphysis of the pubis depressed towards the promontory of the sacrum.

Other obstructions independently of deformed pelves.—There are other circumstances, moreover, which produce nearly the same effect in

labour, as distortion of the bones. A very small pelvis, or one possessing an unusually straight sacrum, will, inasmuch as its cavity must be diminished, occasion some difficulty in labour; so will also an anchylosed state of the os coccygis. But tumors occasionally form in the pelvis, which obstetrically are attended with almost the same difficulty as deformity itself. Sometimes an exostosis is attached to the inside of these bones,—a case which I never met with, and which I believe to be very rare; at others, we encounter tumors of the softer parts, and these, too, more or less retard the child's exit: of this description are polypi and enlarged ovaries. Nay, the same difficulty must evidently exist if the pelvis be of the proper dimensions, provided the head of the child be larger or more strongly ossified than usual. The head must bear a relative proportion to the pelvis for its easy transit. Here [presenting it] is a specimen of congenital hydrocephalus, the head having been opened to complete the delivery. This head would, I presume, independently of the brain, contain about sixteen ounces of fluid, and it would require great exertion to squeeze it through even a very large pelvis. We must hence bear in mind that it is necessary there should be a *relative* size existing between the two organs—the head and the pelvis.

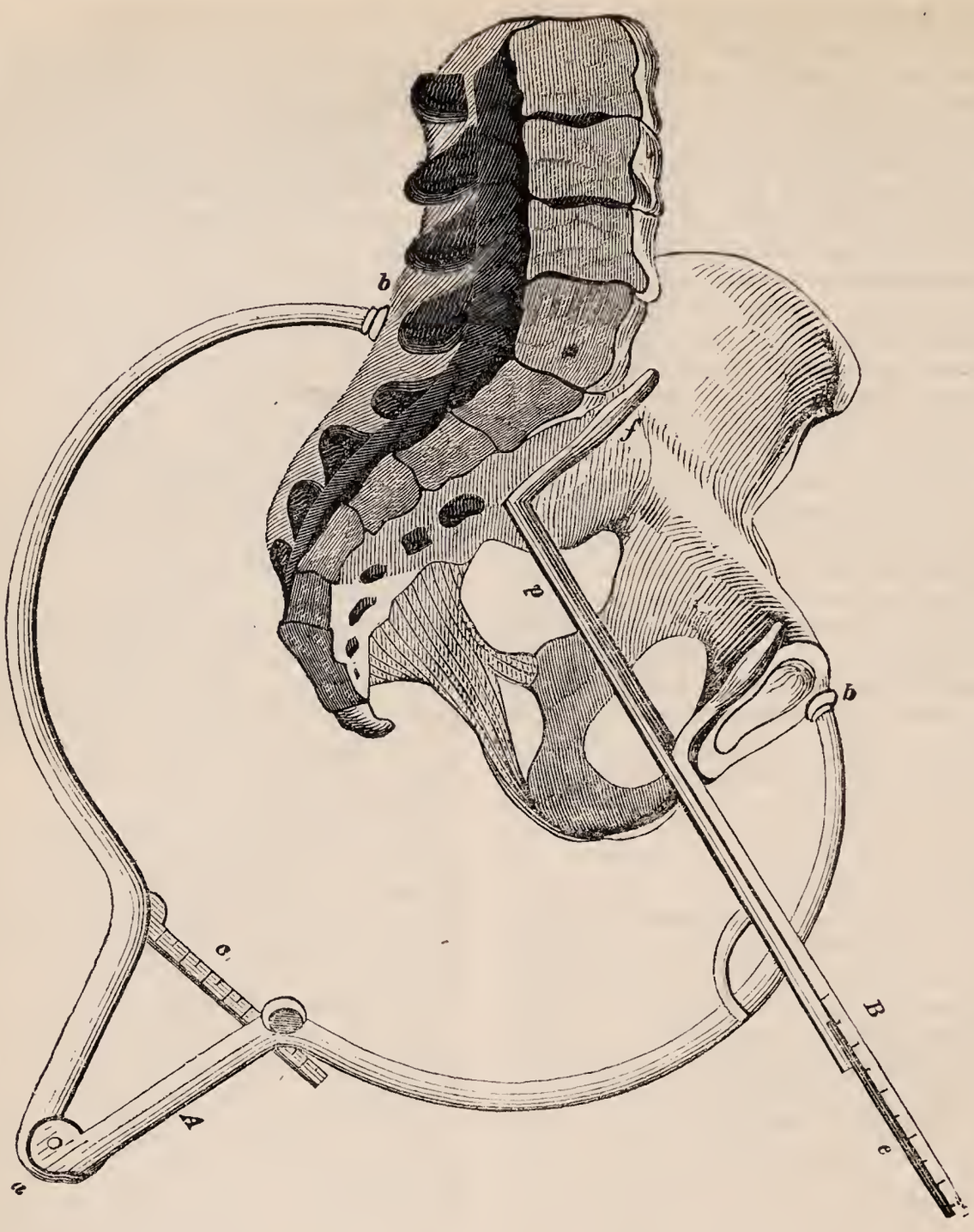
To bring these remarks to a practical conclusion, if a patient wait upon us, desiring us to attend her in her confinement, and we observe that she has a crooked back and waddling gait, particularly if we find that with distortion of the spine she has also distortion of the legs and thighs, we may suspect that her pelvis has suffered more or less. We may then be pretty well convinced that it is not a local circumstance which has produced the curvature of the spine, but a general disease of the system—either rickets or mollities ossium, but most probably the former. It does not, however, necessarily follow, that because a woman has a crooked back, she must, therefore, have a small pelvis. Here is a preparation [presenting it] in which the pelvis in its conjugate diameter is considerably larger than natural, measuring five inches, and yet you see how much the spine is incurvated. In this case, the head would enter easily through the brim, and with some little difficulty would be squeezed through the outlet. Here is another equally valuable specimen of distortion of the spine, but not of the pelvis; and such are by no means rare in anatomical collections. Under the circumstances I have stated, we may *suspect* a woman to have a distorted pelvis, but we can *detect* it only by an internal examination under labour.

PELVIMETERS.

Many ways have been recommended for becoming acquainted with the size of the pelvis internally. The introduction of the first finger of the right hand, as in a common examination, passed from the lower edge of the symphysis pubis to the promontory of the sacrum, is one way; the introduction of the whole hand into the pelvis, with the fingers spread out along the conjugate diameter, is another; and the introduction of two fingers of the left hand—which I myself practise—is a third mode of internal examination. The French, who, I need not tell you, have exerted great ingenuity in the mechanical arts connected with surgery and midwifery, have invented instruments to measure the pelvis, and these have been called *pelvimeters.*

[The learned lecturer then exhibited a plate contained in Boudelocque's work on Midwifery, representing two descriptions of pelvimeters,—one invented by M. Coutouli, called *pelvi-met;* and the other by Boudelocque, to which he gave the name *compas d'épaisseur.* The annexed cut is taken from the plate.]

The pelvimeter of Coutouli (continued Dr. R.) was in common use before the instrument of Boudelocque was invented. The pelvimeter was to be introduced within the vagina, and the knob or projection at the end of the frame was to be placed against the promontory of the sacrum; while the knob at the end of the slide was to be drawn out, so as to touch the inside of the symphysis pubis; and there was then hanging out of the external parts a scale, by which we might exactly read off the dimension of the pelvis in the conjugate diameter. This would be an excellent mode of examining any dry pelvis, which we held in our hand; we could then make an accurate examination of the brim, but we could do it with a common rule better, because we should not have to make any allowance for the difference between a straight and an oblique line. But it was found in practice that this pelvimeter was of little service; because it could not be used when the child's head had at all engaged in the pelvic brim, and it must be a very small pelvis indeed which does not allow the head to descend somewhat into the cavity. It would require that the instrument should be curved to admit of its adaptation, if the head occupied any portion of the cavity; and the slide of a curved instrument not be withdrawn. The pelvimeter of Coutouli being thus found to be almost useless, Boudelocque invented what he called the *compas d'épaisseur*, which was to encircle the hips externally, and not to be introduced within the parts. It consisted of two arms connected by a



REFERENCES. — *A*, Boudelocque's callipers. *a*, The joint at the extremity of the handle. *b b*, The buttons at the extremity of the arms; one placed against the symphysis pubis externally; the other opposite the promontory of the sacrum. *c*, The scale.

B, Coutouli's pelvimeter. *d*, The frame on which the slide moves. *e*, The slide, on which is marked the *scale*. *f f*, The two rests; one placed against the promontory of the sacrum; the other against the symphysis pubis.

joint at the extremity of the handle. One extremity was placed against the outer part of the sacrum, opposite the promontory, and the other against the outer part of the symphysis pubis. A scale was then so formed, adapted, and calculated, as to give us the exact diameters within. By reading the scale, or by deducting three inches from the full space, we were put in possession of the diameter within. Boudelocque supposed that this pelvimeter would be invaluable in the results which it gave us; and so unmercifully did he ride this hobby, that at one period he applied to the legislature to enact a law, that the priest of every district should be furnished with one, and that every young woman who applied for a marriage license should have her hips measured by the priest with these compasses, in order that he might ascertain whether or not she had a pelvis sufficiently capacious to admit the passage of a full-grown fœtus. If he reported there was not space enough, then she should not be allowed to marry. I will not venture to give an opinion as to whe-

ther this practice could have been enforced with any degree of advantage so far as the morals of the people were concerned; but I will just illustrate its inutility by adapting the instrument to this cast: from the back part of the sacrum to the outside of the symphysis pubis, you see, is almost of the standard dimensions—not quite, but nearly so, and yet we have not a space of an inch within, whereas we ought to have a clear diameter to form the standard pelvis of four inches. In my opinion, Boudelocque's instrument would give us a very deceptive and injurious result.

We will resume the subject at the next lecture.

ABSTRACT OF A LECTURE

ON THE

CAUSES AND SYMPTOMS OF CONVULSIONS.

By M. Andral,

Professor of the Faculty of Medicine, &c.

It is important to study carefully the causes of convulsions, for the treatment must be modified according to the source of the malady; and unless we are acquainted with the latter, we cannot calculate upon the success of our remedies.

Predisposing causes.—Among the predisposing causes of convulsions, the period of life which the patient has attained deserves our primary notice. Young children, it is known, are much more subject to the complaint than those who are older; those about the age of puberty are more frequently attacked with it than adults; and adults than the aged. Convulsions may seize those who, to all appearance, enjoy the most perfect health; they may be transient, and leave not a trace behind them to show that they existed. Certain forms or habits of body, and particularly a special condition of the nervous system, exhibit a peculiar susceptibility in this respect. Not to speak of the hereditary predisposition which is manifested towards the disorder in many families, we may observe, that in most children who are subject to convulsions, the head is voluminous; they are remarkable for an extreme excitability, physical as well as intellectual; their skin is generally very delicate and white, and their muscular system sparingly developed; their eyes are haggard and wandering; they have frequent tremblings (*tremblemens*); they sleep little, and often awake with a start; they have harassing dreams, which cause them to cry out with terror; their look is frequently anxious—their complexion changeable, reddening and growing pale in the course of a few minutes,—changes which seem to have a correspondence with the different degrees of cerebral congestion. At the same time the state of the bowels is various; there is also a remarkable degree of dyspnœa sometimes present, vomiting, languor, or sluggishness of the intestines. But besides the disposition that infancy and a nervous temperament give, there are also other influences which favour the development of convulsions. Acute diseases often beget a tendency to them; violent emotions, fright, wrath, jealousy, produce a similar effect. Nor is an involuntary imitation less effectual: every one knows how often convulsions have originated in such a cause; and what is more remarkable, voluntary imitation, or mocking the movements of persons convulsed, have in several instances given rise to the same complaint.

The question has been asked, whether the emotions experienced by the mother during pregnancy do not sometimes become the predisposing causes of convulsions in their children. I can only say, that the fact has by no means been proved; though I am ready to confess, that certain circumstances would seem to render it very probable; for we often find that, in families where both father and mother are completely exempt from convulsive disorders, all the children die of convulsions. It would certainly be desirable, in such cases, to know how far imitation of the complaint of the first child may have determined that of the others. An attack of convulsions, besides, always seems to threaten a future accession; and the more frequently it has occurred, the more an early relapse is to be apprehended.

Exciting causes.—In individuals of peculiar sensibility, in whom a slight pain acts as a violent stimulant to muscular contractions, the least irritation produces a convulsive paroxysm; nor shall we be surprised that it is so, when we recollect the outrageous symptoms which we sometimes observe to be occa-

sioned by minute doses of certain medicinal substances. It is only a few days ago that we have seen a lavement, containing about as much diascordium as would be equivalent to a single grain of opium, give rise to all the symptoms of violent narcotism in a young phthisical person. Nor is it long since another patient, to whom was prescribed a grain of kermes divided into twelve parts, had, to my great astonishment, not less than twelve stools.

The electrical state of the air, on the approach of a storm, has often served to bring on a convulsive fit. Wounds, too, in which nervous filaments have been injured, often produce the same effect. So likewise in certain states of the digestive organs. Dentition also has a powerful influence, and so have inflammations of the mucous coat of the intestinal canal. Foreign bodies in the alimentary tube, changes in the bilious and mucous secretions, and the accumulation of fæcal matter in the bowels, have also the same result. I have seen one case of this description: a child of nine years of age was seized, all at once, and without assignable cause, with convulsions. On the seventh day it was seen that the belly was tense and full; and it was observed that there had been no motion of the bowels since the fit. A purgative was administered, and the child was completely restored. On the other hand, an inconsiderate employment of purgatives has sometimes become the determining cause of convulsions; in fact, every particular impression on the mucous membrane may occasion the same effect. As to worms and their agency in bringing on convulsive fits, the fact is so well known, that it is almost superfluous to note it.

It always deserves to be considered, in what state we find the principal functions in persons predisposed to this disorder. The respiratory process is not in general affected; yet there are occasional instances of its being impeded and labouring. The circulatory function may in a variety of ways give rise to, or encourage the progress of, convulsions. The acceleration of the arterial movement, though artificial, if it last long, may re-act on the nervous system, and thus produce a fit. In children, so strong is the predisposition, that a simple febrile attack may bring out the complaint; and all fevers may thus be considered as determining causes. The same may be said of certain states of the blood. Mere fulness of the vessels may cause convulsions in some cases, as in apoplexy, which often occasions the death of new-born infants. And an opposite state of the system, that of anœmia, for instance, leads to the same results—thus furnishing a remarkable example of causes the most contrasted, giving rise to the same morbid effects. The anœmia may be spontaneous, as in chlorosis; or it may depend on some fault in the sanguification,—when it either directly produces, or greatly aggravates, the convulsive disorder. We must also take into account the alterations which may occur in the quantity and quality of the blood, and especially of the predominance of the serum and diminution of the colouring matter, as we find it in our wards in the cases of numbers of children, pale, languid, and waxen-looking, in whom their bloodlessness is the result of some particular malady—insufficient nourishment, or some other unknown cause. Abundant hæmorrhages also, as is well known, frequently produce convulsions—a fact which is observable even in the animals which are bled to death in slaughter-houses. In man too, and particularly in children, it is observed to arise after a copious hæmorrhage, spontaneous or traumatic. A bleeding from the nose in young persons, though not considerable—certain operations practised on adults—uterine hæmorrhage in women during their confinement, or in consequence of cancer of the uterus, sometimes determine the same effects. Thus we must admit that, in an attack of convulsions, the brain is equally affected by an over-abundant or too sparing a flow of blood to the head. It seems to be beyond a doubt that the brain, in order to conduct properly the important acts which belong to its province, ought to receive a kind of mechanical impulse from the circulatory system. When this impulse is wanting, syncope takes place; when it is in excess, compression and its phenomena result: in another degree, both these disturbances lead to the same effect—convulsions.

Along with changes in the circulatory system which operate in the manner just described, we ought to classify the admixture of different foreign substances; camphor, for example, in over-doses:

and a remarkable epidemic which raged in Germany not many years ago, and was accompanied by convulsions, has been satisfactorily traced to the admixture of poisonous plants with the aliment of the persons who were seized. Epidemics of convulsive *ergotism* supply us with more examples. Nor should we omit to add to the other causes, the transfusion of blood.

I should also allude to some other sources of convulsions—such as mental emotions—which, when violent and unusual, produce certain changes in the milk, and thus give rise to convulsions in children; it is a singular fact, but it is corroborated by the testimony of some of the best authorities. Sömmering cites a case in which a woman who could suckle her own children very well, invariably gave convulsive fits to others. In general, every thing that disturbs the secretions may be looked upon as a cause of convulsions. Suppression of the secretions also, and a too great activity in the nutrition, or the excessive growth of children; different diseases of the skin; certain accidents, as the pricking of pins in the clothes, the irritation which precedes a cutaneous eruption—may sometimes occasion violent convulsions. The cause will also be sometimes found in the genital organs; convulsions often result from the abuse of coition, and from masturbation, particularly in women.

Some women are seized with convulsions at the epoch of their first catamenia; and some have them regularly at all their courses. In some the state of pregnancy interrupts the usual attacks, while in others the convulsions return every month, though the menses be suppressed. Various organic lesions of the brain and nervous system, such as the presence of tubercles, concretions, &c. have a double effect as predisposing and exciting causes. In fine, there are frequent cases in which no possible cause can be assigned for the malady.

Symptoms.—Let us now briefly, and in a summary manner, describe the symptoms of this affection. When convulsions occur in the course of some other disorder, or abruptly, and during an apparent state of health, the movements to which I have alluded show themselves, and may assume an infinite variety of forms, or be confined to a particular part of the body. Thus the organs of respiration, in whole or in part, may be alone affected; the diaphragm may contract anormally, and give rise to the most alarming symptoms; the muscles of the larynx may be affected, so as to cause singular and involuntary cries. The heart may also be convulsed; and so may the muscular tunic of the stomach and bowels, in which latter case involuntary dejections take place, with frequent vomitings. The face is very often convulsed, and the upper extremities and the lower, and, in fine, the muscles of the trunk. There is a kind of convulsions in which the intellectual faculties are undisturbed, and the patient is quite aware of his condition. On the other hand, patients have generally no consciousness of their state.

During the attack, the pulse exhibits no invariable indication. The respiratory function is often embarrassed, which evidently arises from the mechanical impediment offered to its performance by the convulsive action of the thoracic muscles. The skin is generally very dry during the paroxysm, and does not become moist till the fit is nearly over. The urine is also suppressed at the same time, but afterwards flows very limpid and in great abundance. When the attack is over, the muscles which have been affected are usually the seat of sharp pains, and sometimes present the appearance of considerable ecchymosis: their fibres may be lacerated; the bones fractured, curved, or luxated; especially in young subjects.

The duration of an attack is, like that of the malady itself, very uncertain: it may end in death, in the restoration of health, or in a precarious convalescence. In general, relapses are very frequent. The complaint may terminate with an hæmorrhage, a discharge from the bowels, or any other evacuation. M. Husson has also brought to our notice another remarkable termination, or rather interruption, of convulsions—namely, the vaccine. In fine, this disorder, convulsions, may originate various cerebral maladies, or prove fatal all of a sudden by producing cerebral congestion, or complete asphyxia, arising from convulsive contractions of the heart, the diaphragm, the larynx, or the parietes of the chest*.

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* Gazette des Hôpitaux. We shall take an early opportunity of presenting our readers with an abstract of M. Andral's mode of *Treatment*.

ON DENTITION;

WITH AN

ATTEMPT TO EXHIBIT THE OCCASIONAL PRESENCE OF CERTAIN DISEASED CONDITIONS OF THE BODY,

As connected with its Irregular States.

By Dr. Ashburner.

[Continued from page 76.]

We turn now to the teeth. The rudiments or germs of the teeth appear at a very early part of life. Serres says (Anat. et Phys. des Dents, 1817, p. 2.), that nature works at their formation almost immediately after conception. The embryo has hardly begun to be distinct, when the head and all the organs which it contains are sketched out. The teeth, destined to fulfil the first function in the circle of life, form and grow in the interior of the jaws. This philosophical anatomist asserts that the jaws of the fœtus contain, although in a very limited space, the rudiments of all the teeth with which the adult is to be supplied. (See likewise Rousseau, Anat. Comp. du Syst. Dentaire, p. 46.)

In an embryo of two months, he met with the rudiments of the incisors and molares of the first dentition, in the form of rounded bodies not larger than pins' heads (Mem. de la Soc. Med. d'Emul. tom. viii. p. 134.) In one of two months and a half were found the canines, and at three months the germs of all the teeth of the second dentition—even the *dentes sapientiæ* were in existence. These germs are found imbedded in the membranous folds, which at this period constitute the gums. Those of the first dentition are attached immediately to this membranous fold; those of the second are suspended from it by means of a small pedicle. Meckel (Manuel d'Anat. t. iii. p. 341), in each half of the two jaws of a fœtus of the tenth week, saw distinctly the capsules of four teeth: two anterior, smaller; two posterior, more bulky, which were dovetailed together two and two; but the anterior and posterior separated by a space. At the end of the third month a third bag was found between the two pairs, so that the whole number of capsules observed was twenty. He says, commonly about the end of the fourth month a sixth capsule, placed altogether behind, is found, and this is destined for the anterior of the permanent molares.

Serres met with fibrous partitions separating the incisors at four months, but all the other germs were contiguous to one another. At six months, ossification of the partition of the lesser molars was found, while the germs of the two posterior molares were still lodged in one cavity.

At first these germs are little membranous capsules, containing a reddish fluid; the contents gradually become a whitish yellow liquor. Before the fœtus has existed four months in the uterus, and in some cases three months, a small, reddish, and soft body, rises from the bottom of the internal lining of the bag. It gradually assumes a consistence, and becomes the pulp of the tooth. This little substance is abundantly supplied with nerves, and is nourished by blood-vessels ramifying through it. Gradually it acquires the shape of the tooth, and is the nucleus around which the tooth is moulded. The crown of the tooth is the first part formed, and is in existence sometimes before the remainder appears. But the bag in which the pulp first appears, and from which it receives its blood, has a conformation well worthy of attention.

This bag, sac, germ, or capsule, has been sometimes called dental matrix (Rousseau, *ante cit.* p. 50.) John Hunter (Nat. Hist. of the Teeth, p. 87) says, "We find it made up of two lamellæ—an external and an internal. The external is soft and spongy, without any vessels; the other is much firmer, and extremely vascular." Blake (Essay on the Structure and Formation of the Teeth, &c. Dublin, 1801. p. 4) describes these sacs "or membranes to be thickest and most dense next the gum;" but as becoming "by degrees softer and more gelatinous towards the lower part. They can be easily separated into two lamellæ, the external of which is spongy and full of vessels; the internal one is more tender and delicate, and seems to contain no vessels capable of conveying red blood." Hunter and Blake are upon this point at variance. Fox (Nat. Hist. and Dis. of Teeth, p. 20) states that, both in the human subject and in the calf, he has "found both the lamellæ to be very vascular;" and in this assertion he is confirmed by Meckel, who has observed the fact in the human embryo and in that of animals, and who adds the remark, that the external membrane has the largest supply of blood

(Manuel d'Anat. tom. iii. p. 340.) Bichat was at some pains to determine the nature of these membranes; and he conjoins them, asserting their analogy with serous membranes (Anat. Génér. tom. iii. p. 91); but Serres has corrected his view of the anatomy, and declares (Essai, &c. p. 12) that the external and internal membranes are distinct from each other, not only by their distribution, but by structure and function. According to him the external layer is fibrous, opaque, and whitish; on one side attached to the alveolus, to which it serves as periosteum; on the other, applied to the external surface of the internal membrane. Adhering firmly by its interior part to the dental vessels and nerves, it is at the same time united to the cartilage of the gums. John Hunter had observed the existence "of a mucilaginous fluid, like the synovia in the joints, between the internal membrane and the pulp of the tooth." Meckel (t. iii. p. 340) places it between the membranes, and states that the distance which separates these is greater as the fœtus is younger. Serres remarks, that the external membrane has a decided elasticity, and compresses the contained fluid. The internal membrane is, according to Meckel, more spongy, lax, and soft, and more thick than the internal. Serres, on the contrary, declares it to be very thin, transparent, and of a nature *sui generis*. Both agree that it forms a bag, distinct from the external layer and from the gum. It is the formative organ of the enamel, and its relations with the tooth are consequently more intimate than those of the external membrane. It is very abundantly furnished with blood-vessels, as may be demonstrated by a successful injection.

Let us ask, how are the capsules retained normally in their positions?

There must be some law which regulates the positions of the little membranous germs or capsules in the earlier periods of their appearance in the embryo, or they would be thrown together by chance medley, and would become confounded as to their arrangement in their places in the arched line of the jaws. At first, the capsules are lodged in the membranous folds which constitute the gums; those of the first dentition are immediately attached to them; those of the second are suspended from them by a pedicle. The capsules of the first dentition, connected together, lie at the lower part of the gums, and form a continuous chain, which can with ease be detached from the jaw. The capsules of the teeth of the second dentition are nearer to the surface, and approximate the gums more than the others. When the fœtus has been four months in the womb, there are fibrous bands or partitions found between the capsules of the incisor teeth, but the sacs of all the others lie closely attached to each other. At five months, the partitions between the incisors have become bony; the sockets of the molar teeth have become partly ossified. At eight months, the relations of these rudiments remain as before, though their development is advanced. Nine months of gestation pass. The child is born; but though this be a period of important change, so as to form a decided epoch in the history of some other organs, our inquiry as to the normal progress of development in the teeth is not much affected by it. The progress of growth of the teeth follows a law which is not materially influenced in its course by the event of birth. Normally, no teeth have passed through the gums. Dissection shews us the positions of the capsules at this period. For the completion of the first dentition, each jaw has four incisor teeth, two canine, and on each side two molar teeth; their capsules are found to be thus placed in the arch: in the lower jaw the incisors lie obliquely from without inwards; almost contiguous to those of the lateral incisors lie the capsules of the molar teeth, the second behind, and a little lower than the first; so that, looking at the jaw from within, it is perceived that the superior margins of these capsules describe an arc. In this aspect the canine capsules are not seen; they lie externally, and jut out a little before the mental holes. The upper jaw is somewhat differently situated as to its dental capsules. Those of the incisors are less oblique; and those of the molar do not, in union with them, describe the same curve as the capsules of the lower jaw. The canine appear to be external.

It has been remarked, that the capsules of the second dentition are nearer to the gums than those of the first; gradually they change their situation, become more distant, and are at last imbedded in the interior of the jaws.

The development of the tooth proceeds in the capsule; the crown being the first part formed, all the depressions and

eminences which ought to exist on it can be perceived, while no other part of the tooth is yet formed.

It would be very difficult to fix with precision the epoch at which ossification, as it is called, of the teeth commences. Meckel states, that it commences about the middle of the term of pregnancy (tom. iii. p. 342); while the researches of Serres tend to fix it between the third and fourth month. He justly observes (Essai, pp. 57, 58) that diseases may retard the progress of development; and causes which we cannot appreciate may, in certain individuals, advance it. Its normal epoch, then, is not fixed.

The ossification is as much a step in the progress of growth as the cutting of the tooth, and is in all probability subjected to the influences of the same course of laws as those which determine the period of that epoch; and hence the teeth in which ossification has first commenced are those which first present themselves through the gums: thus the inferior central incisors have the first ossific points; then the lateral incisors; thirdly, the anterior molares; and after them the canine.

As to the mode in which the ossification proceeds, the train is this: on the external surface of the pulp, and first on the juttings representing the tubercles of the tooth, an appearance of slender, elastic, delicate little scales, takes place; these are soft, but gradually become thicker and more dense; they are hollow, and very slightly elevated. By degrees an union takes place between them, and at the same time the osseous substance thickens at its first points of existence, at the juttings representing the grinding tubercles; the crown of the tooth gradually enlarges, and at last acquires its full development. Its lower portion, narrowing in all directions, is called the neck of the tooth, and the roots are evidently elongations of the crown: but does the same progress of ossification obtain in the formation of them? Very accurate anatomists are here at issue. Meckel, adopting the views of the English anatomists, asserts that the pulp proceeds absolutely in the same manner in the formation of these as of the crown; while Serres maintains (Essai, p. 65) that the mechanism of their development offers very essential differences. His view is, that the crown is formed at periods distinct from the development of the roots. In the single teeth, a single point of ossification exterior to the pulp indicates the commencing formation of the crown. (Fox, p. 22, states that there are three points; while Blake, p. 6, and Bell, p. 55, say one.) In the double teeth the number of points corresponds with the number of tubercles. When the crown is complete, the tooth is narrowed between it and the root; a line of demarcation exists. Here is the neck, and here the margin of the membrane adheres so firmly that it cannot be separated from the tooth without lacerating several vessels which pass between them into the tooth. Blake (p. 16) found "the membrane much thinner at this part; and I could not," he says, "separate it at any period into two lamellæ." Serres asserts that in the root there is a change of nature and of colour. So far of the teeth with single roots; but in those which have several, when the ossification has proceeded as far as the neck, it is at the exterior suspended: the interior, still concave, begins to be developed; the pulp sinks, and its bulk is reduced; but before it comes to the level of the external ossified part, the roots have already begun to be developed. One, two, three, or four bony tubercles, forming its external layer, are already present; then from the inferior part of the pulp an equal number of osseous laminæ proceed. This account varies very materially from the view given by Fox, who tells us that "the ossific matter is deposited in strata, one withinside the other." "When the body of the tooth is formed, the pulp elongates, and takes that form of the jaw proper to each tooth, and bone is deposited upon it; it then becomes gradually smaller, until it terminates in a point. If a tooth have two or more fangs, the pulp divides, and the ossification proceeds accordingly." Bell adopts the notion of Fox, which is in fact an abstract of the labours of Blake, who was at some pains to make out the physiology of this development. It must be confessed, however, that the matter is not set at rest. The ingenious explanation of Serres, proceeding upon the existence of a structure of blood-vessels, divided into bundles, penetrating the inferior part of the dental germ destined to the formation of the roots, deserves deep attention in the future investigation of this subject.

The ossific deposit, then, is from without inwards; so that the first tubercles

appearing are the parts which remain exposed. The grinding surface and the first shell of the tooth are now the full size which they preserve when the tooth is formed. There is an ample cavity within the shell, a proof that the outer surface of the pulp forms the osseous part of the tooth. As the osseous matter thickens, the pulp and dental cavity diminish; the outer layer being most extensive, advances most slowly; and the inner layers, shorter, are more quickly deposited, making the cavity of a grinder recede with greater rapidity than any other from its upper surface. "After the roots commence, the cavity is soon diminished, the ossification going on at the same time at both the upper and under parts of it. As many conical or flattened tubes are left leading to the cavity as there are roots; and as many hollows or depressions in the superior part of the cavity as there are protuberances on the grinding surface. The pulp, though very much diminished, still retains nearly its original shape." (Blake, p. 13.)

English anatomists have appeared anxious to retain an analogy between the osseous substance of the tooth and common bone. Meckel admits the analogy as far as chemical constitution and physical properties allow him to coincide, but perceives a striking difference in the mode of their union, development, and peculiarities of vital phenomena. In all these, he feels they are more analogous to epidermic formations. We call the basis of the tooth wrongly. It is not bone, and we ought not to speak of ossification. It is harder than bone, and its tissue is not cellular: it is far more solid and compact than bone. Meckel speaks of it as ivory. How Bichat could have detected fibres in this structure, it is difficult to conceive; it is, in fact, composed of layers situated one upon another. Volcher Coiter was the first to observe that the dental substance was formed without any intermediary cartilaginous basis. The whole train of development of the teeth is perfectly dissimilar to the manner in which bone forms and grows. As in a state of health the tissue of tooth ivory is so different from the fabric of bone, so the diseases which affect the two textures have no analogy between them. The spontaneous decomposition of bone after death is found to be much more rapid than that of ivory. In the earth, bones are often found mouldered, while the teeth of the subject have been comparatively little affected. The mineral acids dissolve the earthy salts of bone with rapidity. Several hours' immersion of a tooth in the same liquids hardly affects the ivory, or at most slowly render its lamellated structure more apparent. The chemical composition of bone and of tooth ivory, too, offer very striking differences. Bone, according to Berzelius, (Ure's Dictionary of Chemistry,) in 100 parts, contains of

Phosphate of lime	81·9
Fluate of lime	3
Lime	10
Phosphate of magnesia	1·1
Soda	2
Carbonic acid	2
	100

Ivory, according to the same authority, (Bell on the Teeth, p. 7,) in 100 parts, contains of

Phosphate of lime	62
Fluate of lime	2
Carbonate of lime	5·5
Phosphate of magnesia	1
Soda, and muriate of soda, with a quantity of hydrochlorate of lime inappreciable	1·5
Gelatine and water	28
	100

The sagacity of my friend, Dr. Prout, had led him, at too early a period of his studies in physiology for him to know the views of continental authors, to collect the arguments in the affirmative of the proposition, that the teeth have a stronger analogy with the epidermic formations than with bone. The same views were entertained by Mayer, Kaathoven, Bonn, Walther, and Lavagna, and since ably condensed by Heusinger. (See Meckel, Man d'Anat. tom. iii. p. 357, note des traducteurs, Jourdan et Breschet.) The points are these:—1. In the mammalia, there are insensible transitions, among the teeth, from those which seem most to resemble bone to the different parts of the bony system—nails, hoofs, and hair. 2. The teeth of several of the mammalia have a lamellated structure similar to nails and horn; and this structure, though it may be rendered evident in all the teeth, appears to be lost in some, merely on ac-

count of the accumulation of a large proportion of earthy salts in their composition. 3. The mode of development of the teeth resembles that of nails and horn. 4. Certain teeth are reproduced like nails and horn.

Geoffroy St. Hilaire, in adopting the conclusions upon this subject of Coiter, in his Spicilegium Anatomicum; of Herissant, in his Memoires de l'Academie des Seicnces; of the great Cuvier, in his Animaux Fossiles, art. Elephant; and of Serres, in his Nouvelle Theorie de la Dentition, speaks of the tooth as a mass composed of layers, in which, except a first cartilaginous stuff, there is nothing which can be compared to the osseous tissue, (Système Dentaire des Mammifères et des Oiseaux, p. 23); but Geoffroy St. Hilaire takes a high range in the philosophy of this subject, when, by demonstrating the analogy which exists between the dental system of the mammiferous tribes and the beaks of birds, he carries on the approximation of these organic arrangements to the epidermic formations; and proceeds to shew, that though the teeth and their analogous parts about the head, may be, at a later period of life, destined to important functions in the general process of nutrition, yet that, when the dental formations appear in the fœtus, they are truly fœtal organs, useful and destined to give a mode of termination to the circulating system of the advanced parts of the head, in fixing a limit to a certain number of vascular trunks,—an idea the more important as regarded in relation to the fifty-two germs of teeth existing at an early period of intra-uterine life.

Let us now examine the substance which is found in the interior of the tooth. Each root or fang has a hole at its extremity, for the passage of nerves and bloodvessels, which are distributed to the pulp—a soft substance that occupies the cavity of the tooth, without having any connexion with its parietes. A slight exhalation is found upon its surface. The characters of this substance, according to Serres, resemble those of the nervous ganglia of nutritive life, (Serres, p. 51.) It appears to possess the same kind of sensibility. This organ exercises a very important influence upon the tooth, and plays a part in relation to the general system, not yet well appreciated. The nerve which forms the pulpy part of the internal cavity of the tooth, has appeared to Serres (Essai, p. 52,) to approach, in its structure, the vidian nerve, the communicating branch of the great sympathetic. In the incisor and canine teeth, the nerve and vessels which penetrate the root, having arrived at the neck, swell out. A single tubercle is formed by this swelling, the pulpy part of which is said to be nervous matter: upon this the small vessels ramify. They are much more numerous in youth than in age. In the former, the pulp is red; in the latter, it is a decided yellow. In the larger molar teeth, each nervous branch expands in the dental cavity, and abuts against its neighbour, so that the pulp appears to be formed of as many parts as the tooth has tubercles. The base of each tubercle has a cavity in it, which receives the summit of the pulpous tubercle that belongs to it. Serres says, that in penetrating the dental cavity, the nerve seems to change its characters: it *softens*, changes in *colour* and *organization*, and forms a pulpy nucleus, which he regards as a true ganglion, not unlike the submaxillary ganglion formed by the chorda tympani. I have examined the dental pulp with some care, but I do not feel warranted in affirming the notion of Serres, opposed as his view is to all analogy. This point of organization yet requires investigation. My friend, Professor Macartney, of the University of Dublin, has been in the habit of classing the teeth among the dermoid structures, and he compares the dental pulp to the pulp of a quill. From the views which he entertains on the anatomy of the skin, and of the mode in which nerves terminate in the dermoid formations, he would be disposed to deny that nerve has been traced into the texture of pulps, as a constituent of such organisms. According to this acute observer, the villus of skin is composed of cellular substance, bloodvessel, and invisible expansion of nerve, and wherever a nerve may have been traced to its insertion in the commencement of the pulpous substance of a dermoid part, as in the whisker of a seal or the great quill of a swan, it has, according to him, eluded all further search after it in the interior of the substance itself. Nerve, then, though it exist in such parts, is not, by our present forms of manipulation, to be traced. It is no longer a bundle of fibres, but becomes

altered in its arrangements: it is functional extremity of nerve, and like the nervous part of the retina, is expanded, and quite invisible. Under this idea, the dental pulp is cellular membrane having bloodvessels, and the functional extremity of nerves associated in its structure.

The course of growth of the enamel remains to be examined. Not long after the development of the ivory scales, or even while they are forming, the secretion of enamel begins. The internal membrane of the capsule loosely surrounds (Blake, p. 16) the crown of the tooth. Meckel says (tom. iii. p.344), that it envelops it so as to mould itself perfectly upon its juttings and depressions. From the internal surface of it exhales a fluid, the duty of which is to place on the ivory of the crown a crystalline substance, at first so soft that in the full-grown fœtus it is easily separable from its ivory basis. As the growth of the ivory proceeds, this substance increases in thickness. It is of a pale white while it remains in the interior of the membrane, and does not acquire a polish until it has been exposed to the air. This is the cortex striatus of Blake, —the enamel. It does not extend to the roots of the teeth.

The enamel may be seen on a broken tooth, composed of innumerable fibres, "attached," says de la Hire, "to the internal part of the tooth by their roots, nearly as the nails and horns are to the parts with which they are connected;" but not so intimately, however, as to form more than an adhesion to the surface of the ivory. Concentrated nitric acid quickly dissolves it, and leaves the surface of the ivory smooth. The enamel is thinner on the milk teeth than on those of the adult set. It is thicker on the canine teeth than on the incisors, and is deposited in larger share on the large molar teeth; perhaps because these are destined to support the chief wear of mastication.

The membrane which secretes the enamel invests the crown of the tooth, and adheres firmly to its neck. As ossification advances the crown of the tooth rises, and the membrane of course accompanies it. On the tubercles and cutting edges of the teeth the crystallization of the enamel is first completed, and the process continues until the neck is reached: the membrane covering it becoming gradually thinner and less vascular, is at last quite absorbed. The absorptive process goes on in the gum covering the tooth, which at last presses through, and is said to have cut the gum.

[To be continued.]

OBSERVATIONS ON THE SYMPTOMS AND TREATMENT OF CONSUMPTION;

Being the Substance of a Paper read before the Harveian Society,

By W. Maclure, Esq. Surgeon.

Case of Phthisis Pulmonalis, cured; with Remarks.

John Jones, aged about twenty-five years, is of slender proportions, fair complexion, and gentle dispositions; and has been employed for a considerable time as a footman. About two years ago he had a pleurisy, attended by cough and the usual train of symptoms, which he says was brought on by cold; and for which he was bled at the time, and also blistered. By these means he got rid of the pain, and his cough was considerably mitigated, but was not completely removed. His general health and strength, however, were restored, so far as to enable him to continue in his situation, and to take another after he had left the one he was then in. About three months ago he came to me with the following letter from my friend Mr. Hammond, of Whetstone.

"My dear sir,—The bearer of this is a footman of Mr. Bevan's, who has had inflammation of the pleura, or diseased lungs.

"The part of the house which he inhabits at Belmont is damp, and unfit for him. I have therefore sent him to the London house, to be under your care.

"The blood taken from his arm was highly inflamed. The pain he complains of is in the back of the chest. His bowels want opening now; and a plaister with Spanish-fly ointment, or a blister, perhaps you will approve. Take him in hand and attend him, on Mr. Bevan's account.

"I first gave him calomel and James's powder, and since that salines, with

tincture of digitalis. I fear he is in a consumption; at all events he is consumptive.

"Yours faithfully,
"Wm. Hammond, jun.

When I saw him he complained of a fixed pain immediately below the right scapula, which was increased on his taking a long inspiration; his pulse was 96; his cough very troublesome, especially at night and in the morning; and his expectoration was copious and muco-purulent. He was emaciated; his muscles were soft and flabby; his strength was greatly reduced; and his night sweats were considerable.

Under these circumstances I immediately ordered a blistering plaister to be applied over the situation of the pain. I regulated his bowels, and requested him to use for some time chiefly farinaceous diet. A mixture of a demulcent nature was also ordered, with a view to relieve his cough. But as the unusual result of this case makes it of some importance, the Society will perhaps excuse me if I be rather particular in my detail of the various means which seemed to contribute to the apparent recovery of the patient.

His first cough mixture, then, was composed of five ounces and a half of a solution of the gums Arabic and Tragacanth, in water; to which were added half a drachm of ipecacuan wine, and half an ounce of the syrup of tolu. Of this compound he was desired to take a fourth part four times a day. This was continued for three or four days, till his pulse had diminished somewhat in frequency, and the other hectic symptoms were mitigated; the pain having been removed, at the same time, by one application of the blister.

I then added half an ounce of the syrup of white poppies to his mixture, with a view still more to soothe the irritation of his bronchia; and soon afterwards I applied a blister over the top of the sternum, as it appeared to me that the seat of the irritation was in that neighbourhood. His cough and expectoration, however, still continuing distressing, particularly during the night, I ordered him to have a pill every evening at bedtime, composed of two grains of the extract of poppies, and three of the extract of conium. These various means seemed to afford him better nights, but his cough came on again in the morning, and continued severe until he brought up the muco-purulent matter which had accumulated during sleep. The bowels, inclining all this while to be constipated, were kept soluble by a pill composed of five grains of the compound extract of colocynth; and his diet still consisted chiefly of the *farinacea*, with now and then stewed apples, and other mild and easily digested substances. About the end of August—that is, a fortnight after he had come under my care—his cough had become much easier, and was confined principally to the morning. His pulse had fallen also to 72, and he had evidently begun to improve in appetite, strength, and appearance. In this state of the pulse, I allowed him to have meat once a-day, and a glass of porter; and at the period in question (more, perhaps, to vary his medicine than for any better reason) I changed his cough mixture for the following, desiring him to take two table-spoonfuls of it at any time his cough might give him trouble:—

℞ Sulph. Potassæ, ℈iv.; Oxymel. ʒvi.; Syrup. Papaveris Alba. ʒij.; Vini Antimonii, ♏xl.; Aq. Rosarum, ʒij.; Aq. Puræ, ʒiij. M. ft. mistura.

This compound was continued for the greater part of September with apparent benefit; his cough diminishing, and the expectoration becoming scanty. About this time, beginning to entertain hopes that the tubercle, which no doubt had been in a state of suppuration, was about to heal, its original softened contents being evacuated, and the secretion of new pus from its cyst being probably about to be arrested, I took him to our associate in this Society, Dr. M. Hall, in order to have the benefit of his opinion in a case of so rare occurrence.

Upon our applying the stethoscope to the left side, and leading the patient to speak, no sound was heard; but when it was applied to the right side, immediately below the clavicle, distinct pectoriloquy was audible.

Founding upon this phenomenon alone, notwithstanding the past favourable history of the case, the Doctor at once pronounced that the man would certainly die in a very short time. It was in vain that I urged, as grounds of a more favourable prognosis, the great diminution of his cough, the decrease of his expectoration, his improvement in general health and strength, and above all, the now natural state of his pulse,

(having, as I said, never seen a case of phthisis which in its end was fatal where the pulse at any time during the progress of the disease was below 90)—it was in vain, I say, that I urged all these things on the Doctor; his opinion remained unaltered. We agreed, however, at this meeting, that an issue should be established over the spot which afforded the pectoriloquy—that an evaporating lotion, composed of an ounce of spirits of wine to seven ounces of water, should be applied over the right side of the chest, and that he should continue his meat and porter once a day, and begin also to eat an egg to breakfast.

His pulse did not rise under this regimen, nor did his cough or expectoration increase. On the contrary, the first remained unchanged, and the other two steadily diminished. Having continued the lotion for about a week or ten days, I laid it aside; because I considered that the expense of it might be more usefully employed in giving my patient some tonic medicine, in order to maintain his strength under the weakening effects of the issue, and to hasten his progress towards recovery.

I should not have ventured on a tonic, far less such a tonic as the quinine, which was the one I fixed upon, had there been any hectic fever in the system; but happily there was now nothing of the kind; no rigors, no sweats, and the pulse, when the patient was sitting, or lying down, remained steadily about 72.

About the middle of September, therefore, he began to take four grains of the sulphate of quinine daily, in a mixture of water, and a minute portion of dilute sulphuric acid; and he continued so to do till the 19th of October, when he was advised to drop it.

Under the use of the generous diet, the quinine, and the issue, the case went on prosperously; the patient's strength, flesh, and spirits, having been added to daily, and his cough having disappeared entirely, except for a very little in the morning, attended with a trifling sputum, of an innocent character.

A few days before the period last alluded to, I accompanied the patient again to Dr. Hall, that he might see him in his altered and improved condition. Again the stethoscope was consulted; again it uttered the same sepulchral responses; and, according to it, the poor patient ought by this time to have been moribund—his pulse, good looks, muscular firmness, appetite, and high spirits, notwithstanding.

I need hardly add, that our judicious friend the doctor was very much surprised, as well as gratified, to witness his appearance.

The man says he is now as strong and fat as ever he was in his life, and is anxious again to resume his duties. He was advised, however, to look out for an easy situation, where he should not be much exposed to cold or dampness during the ensuing winter; to fortify himself against the weather by the help of warm clothing; to continue his generous diet; and to resume the use of the lotion, omitting all other medicines, except such as might be necessary to maintain a proper state of his bowels.

Remarks.—This case, in its past history, present state, and possible termination, presents some points of considerable interest.

Previously to the application of the stethoscope, it might readily have been mistaken for one of chronic bronchitis; indeed, that it was so, was once my impression. But the pectoriloquy discovered by that useful instrument removed that idea, by pointing out the existence of a cavity, the recent abode of a softened tubercle.

The next point of importance about it was the state of the pulse. *Fallacissima res*, as the pulse is said commonly to be, I confess that I have been led to place great reliance upon it in diseases of the chest. Whenever I find the pulse at or below 84 or 90, whatever other symptoms of pectoral disorder may be present, I never despair of recovery, but pronounce boldly a favourable prognosis, provided judicious treatment be then adopted; and I do not recollect of ever having been mistaken. In the case before us it was principally upon the pulse that I founded my favourable opinion as to its termination; and the event has shewn that it is, in some cases at least, a safer ground to go upon than the stethoscope. The sagacity of our associate, Dr. Hall, I hold, of course, in considerable respect; but when the stethoscope, in his hands, has been proved not to be such a sure guide in prognosis as the pulse in mine, I think I have some reason to continue my confidence in the latter, and to recommend it to the attention of others.

I am not sure that this case throws much, or any light, on the question with regard to the origin of tubercles; whether they are, in all cases, the product of inflammatory action, as Broussais, Alison, and others, still contend; or whether a congenital predisposition is, in all cases, necessary to their development, as Laennec, Andral, and Armstrong, with more probability, affirm—inflammation being often altogether absent, or at least not capable of being traced, and when present, being caused by the irritation of pre-existing tubercles, or frequently having no etiological connexion whatever with them.

In the case before us I think there was some such connexion; I believe there exists in this young man a tubercular diathesis, but not a very strong one; that the pleurisy which he had about two years ago may have excited one or more tubercles into activity, and that his last attack of inflammation imparted an additional stimulus to them, giving rise to complete softening and ultimate evacuation of the contents, with all the other phenomena which were noticed.

So much for the past history of this case. With regard to its present history, I suppose it to be this. The tubercle or tubercles which were lately in action have been spit up, leaving a cicatrized hollow in the lung, which emits pectoriloquy when the stethoscope is presented to it, while all the other tubercles which may exist are quiescent, and probably, in respect of size, in their smallest possible state.

And if I may hazard a conjecture as to the future state of this young man, I should say that with great care he may live till the usual term of human life, and die of some other disease; or possibly, fresh cold, incident to the unavoidable exposure to the weather of his way of life, may bring on fresh inflammations, which in their turn may again call into action his dormant diathesis to such an extent as to enable it to defeat the best-appointed measures to counteract it, and consumption, though baffled now, may yet rank him among her numerous victims.

March 12, 1832.—Jones, since this paper was read, has got another situation, the duties of which he has performed for the last three months. He continues quite well: his flesh, strength, appetite, all continue as good as ever they were, and he has lost his cough and all traces of morbid expectoration. His pulse this morning, after a walk from Westminster to Harley-street, is just 72. The stethoscope still indicates pectoriloquy when applied to the right side of his thorax, but I think it is not of so distinct and decided a character as formerly. The cavity, I take it, is contracting.

Sept. 10, 1833.—Having lost sight of Jones for more than a year, I accidentally met him not long ago in Parliament-street. He was then entirely well.

14, Harley-Street, Oct. 1833.

PRESENCE OF UREA IN THE BLOOD.

To the Editor of the Medical Gazette.

Sir,

Your correspondents on the subject of urea should be aware, that if they cannot prove the similarity of re-action between that principle and the fatty matter of the blood, when treated with nitric acid, that even were these substances imitating urea in every other reaction, still the test above-mentioned must be considered as a distinguishing characteristic. These gentlemen insist, however, that the fatty matter of the blood does produce the crystallization in question; which I denied in a former communication, and I certainly must again express my conviction to the same effect. I do not, however, require this concession, in order to prove that urea has been demonstrated in the blood, since crystallization produced on the addition of nitric acid to an aqueous solution is allowed to be unequivocal by these gentlemen, and therefore must be a satisfactory evidence of the presence of urea; all other tests being used as auxiliaries. This method of proof (by aqueous digestion) has been adopted with success, and I do not suppose it can be objected to. My reasons for not noticing certain sources of fallacy proposed by your authors, were, that the tests in question did not in any way interfere with the plan I used to prove the presence of urea. It has been expressed as the opinion of these gentlemen, that certain obvious physiological facts would lead them to reject the idea

of urea being present in the blood: this is hardly consistent with their old assertion (which is again brought forward in their last communication)—viz. that they merely deny its presence in the majority of cases of anasarca with coagulable urine. I am accused of not confining myself to facts: I am contented, however, to leave your readers to decide whether or not I deserve this or any other accusation of the kind. It will be found on reference, that my opinion concerning the proportion of fatty matter in the blood, has not been quoted correctly; and as this is the second time the same accident has happened, and the discussion likewise assuming a very unpleasant character, I must close my communications on this subject.

By the insertion of these remarks, you will much oblige

Your obedient servant,

G. O. Rees.

Guy's Hospital, Oct. 16, 1833.

SUSPENSION OF FRACTURED LIMBS.

To the Editor of the Medical Gazette.

Sir,

Since my report of the favourable termination of a case of compound fracture of the tibia, elucidating the advantages of suspension, I have been sent for to another, which has proved no less satisfactory.

A young man, 19 years of age, in the full vigour of health and strength, received a simple comminuted fracture of the lower third of the tibia, in consequence of a heavy draught horse falling on him in such a manner that the injured leg lay under the collar, by which the bone was crushed into at least six portions. After putting the limb into loose splints, I suspended it according to the plan described by me in the last volume of the Gazette, (page 739.) I then took a pint of blood from the arm, gave an aperient, and treated the case on general principles, under which management ossific union was completed on the twenty-second day.

The most singular feature in both cases, however, is the very limited deposition of callus round the broken ends of the bone, especially in the former instance, where the fracture was transverse. The case alluded to was seen by four medical men, who can corroborate the accuracy of my account. If these statements should be borne out by future experience, it will be in opposition to that part of Bichât's work wherein he says, (vide page 100, in his 3d volume of General Anatomy,) "The regular forms of the sound bone are not to be expected here, because the parenchyma of nutrition arising irregularly over the surface of the organ, the exhalation and absorption of gelatine cannot be performed in a precise and regular manner."

I remain, yours most respectfully,

John Grantham.

October 1, 1833.

POISONING WITH RED PRECIPITATE.

To the Editor of the Medical Gazette.

Sir,

I shall feel obliged by your giving publicity to the following case of poisoning by the red precipitate, or nitric oxide of mercury, treated successfully by the introduction of the stomach-pump, and the subsequent administration of flour, water, and albumen.—I am, sir,

Your obedient servant,

R. H. Brett.

Guy's, Oct. 21, 1833.

Ann Thompson, æt. 22, was admitted into Guy's Hospital October 6, 1833, about half-past one A.M., with the following symptoms. A cold clammy condition of the surface of the body, especially the extremities, with a marked degree of stupor, approaching to narcotism; the pupils, although somewhat dilated, were to a certain extent obedient to light; pulse frequent, small, and weak; there was a good deal of eructation and frothy discharge from the mouth, with occasional vomiting. The first portion of fluid voided from her stomach after admission, contained a red powder, which, after a few minutes, subsided to the bottom of the containing vessel; the breath did not possess the odour of spirits or opium; no indication of pain was

evinced when firm pressure was made over the epigastric and abdominal region generally; no blood was voided with the contents of the stomach. The stomach-pump was introduced, and the stomach well washed out with warm water, by which means a small portion more of the red powder was removed. A mixture of flour and water, being the readiest thing at hand, was given her to drink; this she swallowed with great avidity. White of egg, mixed with water, was administered frequently.

10 o'clock A.M.—Symptoms of reaction have come on, as indicated by a hot skin and flushed countenance; complains of considerable pain on pressure over the region of the stomach and abdomen generally; suffers much from cramps in the lower extremities, and has vomited some mucus, but no more red powder; there is a good deal of dryness, soreness, and redness of the fauces; complains of some pain on voiding her urine, which is not deficient in quantity, or mixed with blood; bowels moved several times, without pain or admixture with blood; tongue dry, but not much loaded, or preternaturally red; pupils still slightly dilated; pulse exceedingly small and thready. Mr. Callaway, who saw her at this time, recommended

Hirudines vj. epigastrio, posteaque Cataplasma Sinap. Cont. Albumen.

Evening.—Much the same; skin hot; countenance flushed; bowels once moved; pain in the epigastrium and abdomen relieved.

7th.—The fauces and internal mouth red and painful; complains of a coppery taste in her mouth; in other respects somewhat improved. Mr. Morgan ordered Hirudines vj. epigastrio, and to continue the albumen. As she complained of a good deal of cramp in the legs, and the bowels had not been moved since the preceding evening, she took, about six o'clock P.M., Ol. Ricini, ℥ss.; Træ. Opii, gtt. iv. st.

8th.—Ptyalism is induced; increased tenderness of internal mouth; tongue and lips tumid, parched, and painful; there is a strong mercurial fœtor.

Sod. Borat. ℥j.; Mellis, ℥j.; Sol. Sodæ Chlorid. ℥iv.; Aq. ℥vj. ft. Gargarism.

From this time up to the 16th she continued to improve under the use of albumen, the above-mentioned gargle, and the occasional administration of castor oil to regulate the bowels, but left the hospital on that day, whilst still under the influence of mercury, although cautioned against it.

In this case the flour was administered with a view of decomposing any soluble per-salt of mercury that might have been present in the stomach, by reducing it to the condition of a proto-salt, which forms an insoluble compound with the gluten of the flour; as also, for the purpose of protecting the coats of the stomach from the corroding action of the poison, the albumen was given with the same intent.

I will now detail the mode in which I examined the contents of the stomach. I suspected the poison to be the nitric oxide, because a red powder, enveloped in paper, was given to me by the person who brought the woman to the hospital, a portion of which she had swallowed. This red powder, from mere inspection, led me to form the above opinion.

1. When a portion of it was heated on platinum foil, it became black whilst hot, acquiring its former red colour upon cooling.

2. When ignited in a glass tube, it gave off oxygen gas, metallic globules of running mercury being sublimed. The original powder weighed 12·5 grs.

Examination of the vomited fluid.

1. The clear supernatant mucus was poured off from the red powder which had subsided; this powder was diffused through a mass of what appeared to be unusually firm mucus, so much so as to put on the appearance of coagulated albumen. That it was not this substance will be presently shewn, but simply mucus secreted by the stomach, for the purpose of enveloping the poison, and preventing its coming in contact with the mucous membrane of that organ.

2. This firm clot was washed with distilled water, by which it became whiter and more opaque, but the red powder was still intimately mixed up with it. The clear filtered solution yielded precipitates with tinc. galls, per-sulphate of iron, and ammonia, and sulphate of platina. When evaporated to an inconsiderable bulk, it gelatinized upon cooling. The sub-acetate of lead caused no precipitation.

3. The portion insoluble in water was boiled in a solution of caustic potass for a quarter of an hour; the whole was then freely diluted with distilled water, and placed in a tall glass vessel, in order that the greyish powder which was diffused through it might subside. After some time, as much of the supernatant liquor was poured off as could be done without disturbing the precipitate; this last was then thrown upon a filter, washed with a weak solution of caustic potass, and ultimately with boiling water, the washings being added to the first alkaline solution. This alkaline solution was precipitated even by acetic acid, which albumen under similar circumstances is not; also by the sub-acetate of lead; but not by a solution of alum, which albumen is. The mass enveloping the poisonous matter may, therefore, be fairly considered to be mucus.

4. The powder remaining on the filter, insoluble in caustic potass, was, when dry, a mixture of black and red (the protoxide and per-oxide of mercury.) It was treated with cold dilute muriatic acid, by which means the protoxide was converted into proto chloride, which remained undissolved; whilst the per-oxide, being converted into per-chloride, remained in solution. The proto-chloride was separated by filtration, dried, and found to weigh 4·5 grs., equivalent to 4·15 grs. of the per-oxide. The solution of the per-chloride was then treated with an excess of proto-chloride of tin, and well agitated, until all the metallic mercury was separated; this, when properly washed and dried, weighed 2 grs., equivalent to about 2·16 grs. of per-oxide. The quantity of per-oxide of mercury, therefore, mixed up with the mucus previous to its partial decomposition by ebullition with caustic potass, may be estimated at about 6·31 grains.

That the powder in question was a preparation of mercury, was proved by the muriatic solution yielding an orange yellow colour with potass, a scarlet colour with iodide of potassium and running mercury, both as shewn by the action of proto-muriate of tin, and the subsequent sublimation of the mercury from the precipitate obtained by the addition of caustic potass to the muriatic solution.

DR. GRANT AND THE COLLEGE OF PHYSICIANS.

To the Editor of the Medical Gazette.

Sir,

In your remarks upon Dr. Grant's Introductory Address, you have alluded to the *taste* with which the College of Physicians is more than once introduced into the oration. It is not, however, "a mere matter of taste;" it is required by truth and justice that some statements in that address, relating to the College of Physicians, should be retracted: which, I doubt not, Dr. Grant would be willing to do if he were aware how entirely they misrepresent the case.

The first statement which I shall notice is, that "no physician can *demand* an examination for a Fellowship in virtue of any degree but that of the imperfect medical schools of Oxford and Cambridge:" but the truth is, that no physician can prefer such a *demand* in virtue of that or any other degree. It is, indeed, true that Oxford and Cambridge Graduates are made admissible *at once* to examination for the Fellowship, on account of the necessity which their degree implies of their having passed through an extended course of education: but any Licentiate of *seven years' standing*, wheresoever he may have been educated, is also admissible to an examination for the Fellowship;—and when it is considered that the degree of M.D. cannot be obtained at Oxford or Cambridge in less than twelve, or at the least eleven years, whilst all that has hitherto been required of Licentiates has been a degree which may be obtained in two, three, or at the most four years, the Graduates of the different Universities will not appear to be unequally treated in proportion to their academical standing.

Dr. Grant has no right, therefore, to inflame the minds of his pupils with an assertion that "the Royal College of Physicians of London exercise an *exclusive* power over the profession, which is injurious to its interest and an unjust oppression."

It is true that "the forty-nine physicians of known reputation," who have "petitioned the House of Commons to inquire into this and other abuses of the profession," are pleased to assert, that by the charter of Henry VIII. "the

perpetuity of the College was to be kept up by the future admission of *all* men of the same Faculty into the College:" but this is a statement which has been over-ruled by the courts of law again and again;—and all that is incumbent upon the College, with respect to its perpetuity, is to provide a succession of persons sufficient in number to discharge certain duties imposed upon them by Royal Charter, confirmed by Act of Parliament; and of course they are to choose such persons as shall appear to them the most proper to discharge those duties.

Whether or no the College exercise a sound discretion in giving a certain preference to Oxford and Cambridge Graduates, is the real question in dispute. But this is done, not "in virtue of the degree of *imperfect medical* schools," but because the Graduates of those schools have laid the foundation of the best general education which this country affords, under a professional education acquired in almost all instances elsewhere. And it has been thought advisable to encourage medical students to submit to the expense of time and money required for such general education; and thus to secure an order of practitioners, educated in the same manner and in the same classes as the highest rank of society, who, by their habits and connexions, may be rendered not merely ornamental, but also in some respects useful to the profession.

I protest against being called upon to enter into the question whether the Fellows who have thus been elected, have always been those who best deserved such distinction? Examiners, as well as other men, are fallible in the execution of the trusts committed to them. I contend only for the wholesomeness and soundness of the regulations of the College, if faithfully carried into effect.

But what is it that the Licentiates covet? Is it the privilege of paying a sum of money annually to the College, and of occasionally undergoing the labour, for a very inadequate remuneration, of examining candidates for a license? They desire, it seems, the *name* of the Fellowship (which may be, and I trust is, held in esteem by some part of the profession); but does the public at large know any thing, or care at all for the distinction between Fellows and Licentiates? Did the Fellowship alone ever procure a physician practice? I believe, never: and just at present it may even operate as a temporary disadvantage to its possessor, on account of the prejudice which has been excited in the minds of a part of the profession against the Fellows of the College; although, doubtless, superior talent and information, whether decorated with the Fellowship or not, will in the end be resorted to.

But it is said the Fellows of the College are induced, by *esprit de corps*, to assist one another in the attainment of appointments at hospitals, and to the best introductions to practice. A statement of this kind may be readily hazarded, because, whether well-founded or not, it does not admit of an easy refutation. Yet I believe that whatever advantages of this kind the Fellows have enjoyed may be attributed to family connexions and to those made at the Universities, more than to College influence: and certainly those who have been distinguished amongst the Licentiates have often enjoyed much more of such advantages than many of the Fellows.

However, the Fellowship is accounted a distinction and a privilege; and men complain who are debarred from privileges and honours. But no Licentiate is, in truth, excluded from the Fellowship. Let any Licentiate of seven years' standing, who is really entitled to a distinguished rank in the profession, express a serious wish to be examined for the Fellowship, and there can be little doubt that he would be readily proposed to the College for examination. Nor need he be deterred by the public nature of the required examinations; for an examination conducted before a large body of men, whose various characters and attainments would render them a kind of check upon one another, would be at least as safe to a well-prepared candidate as one carried on by a small number of persons in a private room. The same arguments which some persons use against a restricted admission to the Fellowship, and against requiring certain qualifications in candidates, may be carried, perhaps, further than they intend. Another person may say, "I have no degree, nor have ever studied at any University; but I know as much, or more, than any Graduate: admit me to the Fellowship." And thus the Col-

lege may be called upon to admit to examination any uneducated Sangrado—any unblushing, though ignorant, charlatan.

In another part of his Address, Dr. Grant exclaims that "the exclusive and obnoxious power, gradually usurped by the College of Physicians of London, is contrary to reason, justice, expediency, and public good." But, in the name of reason and of common sense, what *is* the power which the College has usurped? It may, with much more truth, be alleged against the College, that it has suffered its powers to decay for want of use, than that it has usurped new ones. By its supineness in giving up to the Society of Apothecaries the examination and control of general practitioners in physic, it has lost much of its former influence in the profession; and the existing state of the laws relating to physic and surgery renders it quite unable to repress "the temerity of wicked men, and the practice of the ignorant." Therefore, if these objects, for which the College of Physicians was founded, be of any value to society, its powers should be extended rather than abridged. The College requires an extension of its powers, not only for the purposes just mentioned, but also to enable it to regulate effectually the education of the great body of physicians. But assuredly its regulating and controlling powers would not be well administered if placed in the hands of unlimited numbers—if thrown open to all who should claim a share of them, whatever might be their pretensions;—pretensions of which it is vain to say that examinations alone, without restriction as to the qualifications of candidates, could ever be made a sufficient test.—Your obedient servant,

A Fellow of the College of Physicians.

Oct. 10, 1833.

SUGGESTIONS ON MEDICAL REFORM.

To the Editor of the Medical Gazette.

Sir,

Those who take an interest in the honour and prosperity of the medical profession have reason to rejoice that no hasty legislative measure regarding it was adopted during the late session of parliament; time is now given for the opinion of the profession to be formed, and for the distinct and unequivocal expression of that opinion. As it seems to be the universal feeling that things cannot be allowed to remain in their present confused and uncertain state, those who have turned their attention to the subject are encouraged to come forward with their suggestions.

The parliamentary recess is not likely to be of long continuance, and no time ought to be lost in ascertaining the opinions of all branches of the profession over the whole united kingdoms, that we may not be taken by surprise during the next session. It is to be hoped that no jealousy between Doctors and Apothecaries, between Edinburgh Graduates and London Licentiates, will interfere to obstruct a reform upon liberal principles and a general plan, such as will promote the public good, and raise the character of our profession.

With the view of exciting discussion, I beg your insertion of a few remarks on the state of opinion on these subjects in this quarter.

Two opinions are by many strongly expressed, and are, I believe, pretty generally entertained. The first, that all monopoly of teaching the medical sciences ought to be put an end to; the second, that there should be an equality and reciprocity of dignities and privileges in all departments of the profession, and throughout the whole of the British dominions.

The University monopoly of granting degrees may have been at one time useful, as making provision for the permanent teaching of medicine; it has outlived the purposes of its establishment, however, and is now on all hands considered a nuisance. The matter stands thus: the crown has the patronage of the medical chairs, and thus the appointments rest with the Home Secretary. These are usually made the subjects of personal favouritism by him, or by those who influence him; or else are given away at the solicitation of members of parliament connected with this part of the country, whose relatives and political supporters are then the favoured in-

dividuals. It thus happens that our chairs are more frequently than otherwise filled by individuals of mediocrity in point of talent, and little able to convey instruction. Some able men we have still in our northern Universities, I am proud to say; and their lights serve to render the surrounding darkness more visible. I do not suppose that, in the memory of man, such a thing has occurred as the slightest attempt on the part of government to learn the public voice as to the fittest successor to a vacant professorship—not even by consulting the other professors, who, *cæteris paribus*, would naturally prefer the ablest man for their colleague.

The same system, though differing perhaps in point of form, prevails in all the Universities. I observed in the newspapers, that the Lord Chancellor lately remarked severely on the Edinburgh Town Council having, seemingly through political feeling, bestowed an important chair on an obscure person in preference to some of the most eminent men of the day. Was his Lordship aware that, at the very time he spoke, a similar transaction was going on in this University, under the sanction of that very government of which his Lordship forms so distinguished a part?

But I wish not to allude to recent appointments, nor to attack individuals; my object is to provide for the future, by directing attention to the system. Can there be any thing more absurd than that the education of those to whom the charge of the public health is to be committed, should be left to persons appointed as I have described? It matters not how much experienced as a physician, how luminous as a demonstrator, how eloquent as a lecturer, the private teacher may be; the candidate for graduation is compelled to pay his money to the University monopolists, and what is even worse, is compelled to waste his time in listening to their careless humdrum.

The following outlines of a plan I would propose as applicable to Scotland, and I have no doubt it might be so moulded as to include the English Universities and medical corporations also.

Let the endowments of the medical professorships be continued. Human nature is so prone to the abuse of patronage, that it is hopeless to attempt any improvement in the mode of election. Even the Concours, we find, works ill in Paris. Let the crown still appoint, and political partizans and members-of-parliament's cousins be invested with gowns, as heretofore; but let the privilege of granting degrees be extended to the Faculty of Physicians and Surgeons. Let the degrees be doctor in medicine and doctor in surgery, as in France; and let a high standard of education be fixed upon, to be the same in all places, and for both degrees. The College of Physicians and the College of Surgeons, in Edinburgh, might elect each a certain number of examiners, to form a court of graduation.

The tickets of all legally qualified practitioners, who should give courses of lectures under regulations to be laid down by a general law, ought to be received both by Universities and other bodies privileged to grant degrees.

In London one or more courts might be formed by the medical corporations, leaving untouched, except as to their exclusiveness, the rights of the English Universities.

The really-talented men in our Universities could suffer nothing by such a change; they would always attract classes; and it is hard that the general good should give way to the private interests of rash men who have obtruded themselves, or been thrust by their friends, into situations for which nature never intended them.

To prevent improper competition, let no fees be paid to examiners; let them be remunerated by a fixed salary from the stamp-duties now paid on degrees.

After mature deliberation, the number of years study, and the courses of lectures, ought to be prescribed by a positive enactment, from which no deviation ought to be permitted on any pretence.

Those receiving degrees in this manner should be deemed qualified to practise in all parts of the country, as physicians, surgeons, and apothecaries; and ought to have no other limitation than what they may choose to set themselves, in turning particular attention to any one branch of the profession. The absurdity of one set of qualifications being required from those who take charge of the health of one part of the country, and another from those who perform the same office in another part, would thus be done away with, and an end put to all invidious distinctions.

All who practise on the health of the lieges, under any denomination whatever, without a legal authority, ought to be severely punished, and that at the instanee of the publie prosecutor.

By sueh a plan we might hope to see the profession united in one harmonious whole. A few years ago any idea of the kind might justly have been deemed visionary; but times are ehanged, and I am joined by many in a confident hope of seeing some reform equally effective, if not the same, earried into execution.

I am, sir,
Your very obedient servant,
GLASGUENSIS.

Glasgow, Oct. 10, 1833.

REPORT

OF

THE SELECT PARLIAMENTARY COMMITTEE,

Appointed to inquire into the expediency of continuing the Vaccine Board.

THE objeet of establishing a National Vaccine Institution, as declared in Parliament, in 1808, by those who promoted its first institution, was, to forward the general adoption of vaccination throughout the empire, by giving to the practice the public countenance and support of Government. To most persons of intelligence, the results of experience, both at home and abroad, appeared, even at that time, decisive of the great advantages of vaccination; but whether or no it were infallible as a preventive of small-pox, was a question still involved in uncertainty. In order, therefore, to ascertain with precision the facts by which those doubts might be dispelled, to conduct such investigations under the eye of the public, and to insure accuracy to the publication of the results when ascertained, it was proposed that all cases of reputed failure should be referred to the Board. The Board were also to organize and set in action a central institution for carrying on in London, under their own immediate superintendence, the practice of vaccination, and for distributing vaccine lymph to every part of the empire.

The present objects of the Board, as stated to the Committee by the principal officers of the establishment, are, to observe the effects of vaccination in preventing the recurrence and spread of small-pox; to investigate cases of reputed small-pox recurring after reputed vaccination, and of cow-pox, when attended with inflammation, or any eruptive disorder, or when, in any other respect, anomalous in character; to preserve, by immediately superintending the practiee of vaccination in London, an authentic form of the vaccine disease, on a scale commensurate to the demands for lymph; to furnish a supply of lymph instantly on applieation; to inquire into the circumstances under which lymph has been obtained in cases of its failing to produce the cow-pox; to establish among medical praetitioners an approved mode of vaccinating, and generally to discountenanee the practice of variolous inoculation, and to eneourage the practice of vaecination.

The following has, at different periods, been the constitution of the Managing Board of the National Establishment:—From 1808 to 1826, the physicians and surgeons, who, by virtue of the offices they held in their respective Colleges, were members of the Board, were eight in number, viz. the President and four Censors of the College of Physicians, and the Master and two Governors of the College of Surgeons. In 1826, in consequence of a recommendation from the Secretary of State for the Home Department, the number of members was reduced to five, who from that time to 1832 were the President and two Senior Censors of the College of Physicians, and the President and one Vice-President of the College of Surgeons. In 1832, in consequence of another suggestion from the Home Office, this number was further reduced to three, and at present consists of the President and Senior Censor of the College of Physicians and the President of the College of Surgeons. The present number of the Board cannot, in the opinion of the President of the College of Physicians, be further reduced, without lessening its efficiency. From the first establishment of the Board until the present time, each *ex officio* member of the Board has received the salary of 100*l.* a year.

The Registrar and the executive officers of the establishment are appointed by the Managing Board, who determine what shall be the number, the duties, and salaries, of the offices to which they appoint.

The following is a comparative view of the whole establishment and expenditure of the Board, at the two periods of 1821 and 1832, arranged under the heads of staff; rent, taxes, &c. of house; stationary vaccinators, and miscellaneous expenditure.

1821:	£.	£.
President and four Censors of the College of Physicians	500	
Master and two Governors of the College of Surgeons..	300	
Registrar of the Board	300	
Director	200	
Secretary	50	
Messenger.....	52	
Housekeeper	40	
Total Staff.....		£1,442
Rent of Furnished House		260
Thirteen Stationary Vaccinators, viz.		
One at 150*l.*.....	150	
Five at 100*l.*	500	
One at 75*l.* including allowance for rent	75	
Six at 50*l.*	300	
		1,025
Miscellaneous Expenditure.....		183
Total, 1821		£2,910

1832:	£.	£.	*s.*	*d.*
President and two Censors of the College of Physicians	300			
President & Vice-President of the College of Surgeons	200			
Registrar of the Board	200			
Inspector of Vaccination	200			
Secretary	50			
Treasurer	25			
Messenger	55			
Total Staff.....		1,030	0	0
Rent, Taxes, and Repairs of Unfurnished House		204	9	11
Twelve Stationary Vaccinators, viz.				
Two at 150*l.*	300			
Two at 100*l.*	200			
Eight at 50*l.*	400			
Allowance of Rent to one Vaccinator	10			
		910	0	0
Miscellaneous Expenditure		177	0	0
Total, 1832....		£2,321	9	11

The sum actually voted in supply by Parliament, in support of the establishment, was from 1809 to 1827, inclusive £3000

The vote was reduced, from 1828 to 1831, inclusive, to . . . 2500

And was further reduced in the estimates of 1832 and 1833, to . 2200

The meetings of the Board have been held on the average, during the last five years, about once a fortnight, as appears from their minute-book. The average number of members attending the meetings during that period has been three; and the average number of letters or communications taken into consideration by the Board at each meeting, during the same period, has been four.

The ordinary business of the Board consists in receiving the Registrar's report of the letters addressed to the Board, and in directing the answers to be written; in receiving the inspector's report respecting the stationary vaccinators, and the distribution of lymph; in nominating and electing the vaccinators, and in fixing their stations, duties, and salaries; in appointing persons to be extraordinary or corresponding vaccinators; and in directing inquiry to be made by the Registrar or Inspector concerning the failure of lymph to produce cow-pox, or concerning cases of cow-pox anomalous in character, or of small-pox after vaccination. These matters, with the consideration of the report to be annually laid before Parliament, constitute the mass of business that comes before the Board.

The Registrar and the Inspector are permanent officers appointed by the Board, each receiving a salary of 200*l.* a year. The Registrar superintends the correspondence of the Board on all matters relating to vaccination, attends all their meetings, selects from the mass of the correspondence such letters as in his opinion require their consideration, receives their instructions as to what answers he shall write, and records the minutes of the Board's proceedings.

The Inspector, besides his salary, has, by way of emolument, the house, which is the central station of the Board, to live in, and allowance of coal and candles. He superintends the stationary vaccinators, occasionally visits their stations, and examines their books. He receives the returns of the number of patients they vaccinate, and of the charges of lymph they distribute. He requires and receives from the vaccinators supplies of lymph adequate to the demand made upon the Board; incloses the charges in covers, which he sends to the Secretary of State's office, to be from thence forwarded, post-free, to the applicants. He incloses in every packet of lymph the printed instructions of the Board, in which the applicant is directed

how to use the lymph, is requested to inform the Board with what success he has used it, and is earnestly recommended to endeavour to keep up his own supply of lymph, by maintaining a constant succession of patients under vaccination.

The stationary vaccinators of the Board are twelve in number; two of whom receive a salary of 150*l.*, two of 100*l.*, and eight of 50*l.* a year. The two who receive the highest salary are Mr. Carpue, the vaccinator at the central station, who attends to vaccinate one hour a day, six times a week, and Mr. Gilham, the vaccinator at Rowland Hill's Chapel, who attends two hours a day, three times a week, and is stated to be the most active and persevering of all the vaccinators of the Board.

Each stationary vaccinator is required, under pain of dismissal in case of failure, to keep up his own supply of lymph, by preserving a constant succession of patients, and to furnish the board with lymph on the requisition of the inspector.

The extraordinary vaccinators of the Board are practitioners appointed by the Board to vaccinate in London, without salary. The stationary vaccinators are usually selected from this list.

The corresponding vaccinators of the Board are practitioners in the country, who on account of their zeal in promoting vaccination have the honour conferred upon them by the Board of being placed in this list. The appointment by the Board of corresponding vaccinators in England and Wales is almost exclusively restricted to such practitioners as are members of the College of Surgeons of London.

Besides the National Establishment there are two private institutions in London for promoting vaccination, the Small-pox Hospital, at King's Cross, St. Pancras, and the London Vaccine Institution or Jennerian Society.

The hospital at King's Cross was originally founded for the reception of patients attacked by casual small-pox, and for diffusing inoculation among the poor of London. In 1799 this institution began to vaccinate out-patients; in 1808 it ceased to inoculate out-patients, and vaccinated them instead; and in 1822 it discontinued inoculation upon in-patients also. The income of the hospital is about 1,100*l.* a year, three-fourths of which arise from dividends on invested capital, and the remainder from the contributions of individuals and other casual sources. The principal charge on this income arises from the maintenance of the small-pox wards, to which, in 1832, 330 patients were admitted. During the same year, at the vaccine station of the hospital there were vaccinated 3,701 persons, and lymph was distributed to 1,443 applicants. The hospital supplies lymph gratuitously to all applicants, and contemplates establishing several branch vaccine stations in London.

The London Vaccine Institution was founded in 1806 by certain subscribers to the Royal Jennerian Society, who, owing to dissensions in the society, (of which some account is given in the evidence), seceded. The original Royal Jennerian Society was established in 1803, and until 1806 was well supported; but by the secession of many of its subscribers at the period above referred to, it was brought to the verge of dissolution, and was finally dissolved in the year 1809, almost immediately on the founding of the National Establishment. Another Society, having the same name, was established in 1813 by certain life governors of the original society, who were also connected with the London Vaccine Institution. These two institutions, bearing different names, appear now to subsist under one common management, though separate reports relating to income and expenditure are made to the subscribers of each institution; but this practice, it is stated, is about to be discontinued, and henceforward a consolidated account is to be presented to the subscribers. The joint income of the two institutions was, in 1832, 894*l.* 16*s.* 6*d.*, and was derived entirely from private contributions. The expenditure for the same year was 871*l.* 16*s.* 5*d.*, at which cost three stations in London were maintained, 5,641 patients vaccinated, and 43,000 charges of lymph distributed. One vaccinator is deemed sufficient for the three stations, each of which is open for nearly an hour five days in every week. It is to subscribers only, or by order of subscribers, that vaccine lymph is supplied free of charge, but the superintendent is not bound to adhere strictly to this regulation. A large proportion of the subscribers are wholesale druggists in London, or medical practitioners. Partly owing to the foregoing regulation, and partly to another regulation which requires correspondents to pay the postage of letters, the greater number of applications for lymph by practitioners in the country are made through the medium of wholesale druggists, subscribers to the institution. For the details of the expenditure of this institution the committee refer to the appendix.

The extent to which, in the year 1832, vaccination was practised in London by the National Establishment, the Hospital at King's Cross, and the London Vaccine Institution, is shown in the following table:—

	Number of Persons Vaccinated.	Number of Charges of Lymph supplied.	Number of Applicants supplied with Lymph.
By the National Establishment	14,190	100,513	6,852
By the Hospital at King's Cross	3,701	no return	1,443
By the London Vaccine Institution..	5,641	43,164	no return
Total.....	23,532	—	—

To the total number vaccinated at these institutions, viz. 23,532, must be added a number privately vaccinated, to obtain the total vaccinated in London. The number of registered births in the metropolitan parishes, on the average of the years 1830, 1831, and 1832, was about 35,000. If from this number we deduct the number of infants who die within a few months after birth, the remainder will probably afford a result not very far exceeding the sum of those who, at the vaccine institutions and in private, undergo vaccination.

The effect of vaccination, thus extensively practised, on the prevalence of small-pox in the metropolis, will be rendered evident by the following table, which exhibits, during successive periods of ten years previous and subsequent to the first introduction of vaccination, in the parishes lying within the bills of mortality, the average total annual mortality, the average annual mortality from small-pox, and in every 1,000 deaths the proportionate number of deaths from small-pox:

PERIOD.	TOTAL Mortality.	Mortality from Small-pox.	Proportion of Deaths from Small-pox in every 1,000 Deaths.	Year of Census.	Population of Parishes within Bills of Mortality.
Average of ten years, from 1770 to 1780	21,591	2,204	102	—	—
Ditto from 1780 to 1790	19,517	1,712	88	—	—
Ditto from 1790 to 1800	19,177	1,768	92	—	—
Ditto from 1800 to 1810	18,891	1,374	73	1801	746,953
Ditto from 1810 to 1820	19,061	833	43	1811	855,626
Ditto from 1820 to 1830	20,680	715	35	1821	1,011,951
Average of three years, from 1830 to 1832	25,196	654	26	1831	1,180,075

From this table it appears that the proportionate mortality from small-pox, which before 1800, when vaccination began, was about one in every ten deaths, is now reduced to about three in every 100 deaths, and is therefore only between one-third and one-fourth of what it was prior to the introduction of vaccination.

The effect of vaccination in diminishing the deaths from small-pox in a mixed population, composed partly of persons who have been vaccinated, and partly of persons who have not, has been made apparent in the foregoing abstract from the bills of mortality. With regard to those who have undergone vaccination, the committee have not been able to learn with precision in what proportion they are liable to small-pox, nor in what proportion cases of small-pox after vaccination are fatal. A return has been made by the National Establishment, purporting to give, as the result of their experience during the last seven years, the number of patients vaccinated by each stationary vaccinator, and out of those patients the number who, to the knowledge of the vaccinator, were subsequently affected by modified small-pox. The proportion, as stated by the different vaccinators, varies from seven cases in 10,000 up to seventy; nor, considering how the information is obtained on which the return is founded, is this wide difference in their statements to be wondered at. Such a return, to justify the drawing any certain conclusion from it, should be founded on a sedulous inquiry, tracing out for a series of years the history of as many of the vaccinated patients as possible, in respect to their being or not being subject afterwards to small-pox. The return in question appears to rest on that number of medical cases only which have fallen casually under the notice of the vaccinators. The labour and difficulty that would attend such an inquiry as is above suggested, precludes the possibility of its being undertaken by the vaccinators of the Board. Considering, therefore, how many cases of small-pox after vaccination must escape the notice of the vaccinator, it is probable that the real proportion of such cases is

greater than the greatest proportion stated in any one of the returns in question—that is, than seven in 1000.

The return of the National Establishment states also, that during the last seven years, out of 83,647 vaccinations by the stationary vaccinators, two cases only came under their notice in which small-pox afterwards occurred, attended with a fatal result; and in one of these two cases it was doubtful whether the disease was really small-pox. The objections that were made to the statement of the number of cases of small-pox after vaccination, as being inconclusive, will apply also to this return. More information, however, on this part of the subject has been obtained from Dr. Gregory, physician to the Small-pox Hospital, who states, that out of 1785 cases of small-pox admitted into the hospital in the last seven years, 619 were cases occurring after reputed vaccination; of the 1166 remaining patients who had not undergone vaccination, 494 died—that is, 42 per cent. Of the 619 patients who were reputed to have undergone vaccination, 40 died—that is, only 6 per cent., which is one-seventh only of the mortality that befel the non-vaccinated patients. The mortality of six per cent. must far exceed the average mortality in small-pox after vaccination, since it is only in the worst cases of the disease, and not in the mild and modified form in which it usually appears after vaccination, that the patient would be thought to require hospital assistance.

Were it assumed, as a basis on which to calculate, that out of every 100 persons vaccinated one is attacked by small-pox, and that out of every 100 such cases five were fatal, it would follow, that out of every 10,000 persons vaccinated, five only, or out of every 2000 persons vaccinated, one only, would die of small-pox; but the real proportion is probably much less than this.

Admitting, then, the efficacy of vaccination in diminishing the mortality from small-pox, and in preserving the vaccinated, in a very great majority of cases, from being attacked by that disease, it cannot be doubted that it is of the greatest importance to maintain and promote the practice of vaccination; and the committee have considered in what manner this may best be effected. On examination of the course pursued by the National Establishment, the Small-pox Hospital, and the London Vaccine Institution, it appears that there are two essential points to which the attention and resources of a society for promoting vaccination require to be directed; the first regards the providing a supply of lymph, and the second the distribution of it.

As regards the providing a supply of lymph, it is necessary, for preserving the vaccine disease itself, to keep up a constant and uninterrupted succession of patients under vaccination, and that to an extent adequate to meet the demand for lymph. This requires to be done, in pursuance of some organized plan, by officers receiving a salary for the regular performance of their duty. The only proper field for carrying such a plan into execution is in the centre of the greatest and densest mass of population. When the inhabitants of a district are few and scattered, the disease cannot be kept alive, since in proportion to the exertions of the vaccinator to promote vaccination in his neighbourhood, does the difficulty increase of finding a regular succession of patients who are susceptible of taking the cow-pox. From this cause it frequently happens that in the larger provincial towns, in Dublin, and even at some of the London stations, the vaccinators fail in maintaining a succession of patients. The difficulty of keeping up the supply is greatest in the winter time; partly because the contagion does not then take so well, partly from the unwillingness of parents to carry their children from home in severe weather. The apprehensions expressed by some of the witnesses, that during some winter season the disease may be lost, appear to be groundless; since, at that period of the year, the precaution may be taken of having armed points in store, which, in case of failure in the succession of patients, may be had recourse to for renewing the disease. In this essential point, which concerns the providing of lymph, the National Establishment, the Hospital at King's Cross, and the London Vaccine Institution, all agree in practice; viz. in confining the stations where, under the superintendence of the Managing Board, or Governors, vaccination is carried on by salaried medical officers, to London only, and in limiting their efforts, so far as the country is concerned, to the distribution of lymph.

For the same reason that concentration of means in the largest city of the empire is necessary, in order to maintain a succession of patients, too great a multiplication and proximity of stations in the same city is to be avoided. If too near, they interfere with the maintenance by each vaccinator of the succession of patients. At the two stations in London where vaccination is carried on on the largest scale, the station of the Board at Rowland Hill's Chapel, and that of the Small-pox Hospital at King's Cross, about 3700 persons are vaccinated in the year. This number is drawn to the latter station from the population inhabiting the surrounding area

to the distance of half a mile. Concentration of numbers at each station is expedient for another reason. For the supply of charges of lymph it is necessary to select healthy children; from the children of the poor, it is stated that it is seldom possible to vaccinate: the children of tradespeople, of the least opulent of the middle class of society, and of the upper class of workmen, are depended upon for this purpose, and in fact are principally brought to the vaccine stations.

On examining the numbers vaccinated at the different stations of the National Establishment, in the year 1832, it appears that they vary from 3,761, the number vaccinated by Mr. Gilham, down to 346; which great disproportion affords reason for believing that the management of the details of the business of the Establishment, in respect of the choice of stations or of the vaccinators, may admit of considerable improvement. Dr. Gregory recommends the consolidation of some of the minor stations into two principal ones, one situated in the east, and the other in the west of London. As vaccination is carried on in London by three separate institutions, it is highly to be desired, in order to give the greater efficiency to their exertions, that they should so far act on the principle of co-operation as not to allow the stations of one institution to interfere with the stations of another.

After making provision for the supply of lymph, by appointing stations for vaccination in London, to be attended by salaried medical officers, the other essential point for which provision is required to be made, is the distribution of lymph. To this end the vaccinators are to prepare charges of lymph; those charges are to be collected, and are to be numbered or registered, that in case of vaccination not taking, or anomalous disease ensuing, it may be known what vaccinator supplied the lymph; the applications made for lymph are to be complied with, and the charges are to be distributed to the applicants throughout the empire. It depends rather on the government of the country, than on the vaccine establishment or institution, whether lymph shall effectually be distributed. The privilege granted to the National Establishment of receiving letters applying for lymph, and transmitting packets of lymph post-free, is a privilege, it appears to the committee, which ought to be extended to every vaccine institution in London, in order to promote the distribution of lymph throughout every part of the empire.

From an examination of the minutes of the Managing Board of the National Vaccine Establishment, it appears that the business of the Establishment is confined almost entirely to carrying into execution those two points, which the committee have stated they consider essential; the securing a supply of lymph, and the distributing of it.

Other duties than seeing to the observance of these two points were formerly devolved on the Managing Board. The investigation of all doubtful cases was to be referred to this Board. Two doubts had been expressed and rendered current by the objectors to the new practice. Was vaccination a preventive of small-pox? Did not vaccination give rise to a new class of inflammatory or eruptive disorders? Dr. Jenner had given undue advantage to the first class of objectors, by claiming more for the discovery than it has since been found entitled to. He had announced it, not as an almost certain, but as an infallible preventive of small-pox. The fate of the new practice was thus made to hang on the occurrence of a single case of small-pox after vaccination. Real or reputed cases of the kind did occur; investigations were required of the Board, reports on which were to be drawn up and laid before parliament. Subsequent experience having shown that the occurrence of small-pox, in a modified form, after vaccination, is not unfrequent, the pretension to perfect immunity from small-pox has been abandoned, a high degree of probability has taken the place of certainty, and the necessity of investigating every case of the kind has disappeared.

The other class of objectors are no longer heard of. Inflammation rarely follows the puncture; and other eruptive disorders are occasionally contemporaneous with small-pox. It may be well, when such cases occur, to render them public, as a caution to the vaccinator who provides the lymph; but they do not appear to require any special investigation by the Managing Board.

The practice of the Managing Board, during the last five years, confirms the view taken by the committee, that investigations by the Board of the nature adverted to are no longer necessary. Mr. Simpson, the inspector, states that very few anomalous cases have been reported to him by the stationary vaccinators during the last five years, and that these were of so mild a nature that he did not formally report them to the Board. On the minutes of the Board, during the same period, only two entries appear in which the inspector or registrar were directed to visit or inquire into the case of any patient labouring under reputed small-pox after vaccination, or suffering from any eruptive disorder while undergoing vaccination.

Another duty, which at the time of its establishment it was proposed to devolve on the Board, was that of establishing an

improved method of operating in vaccination. Besides circulating printed directions how to vaccinate according to the plan generally in use, the Board make no endeavour to establish such uniformity. The vaccinators of the Establishment state they are not specially instructed how to vaccinate, nor indeed do such instructions appear to be necessary, since all the modes of operating, though differing considerably in the detail, appear in the result to be almost equally successful.

From an examination of the minutes of the Board, and a consideration of the evidence, it appears therefore to the committee, that, except the making an annual report to parliament, no other duties of importance now belong to the Board than to superintend the officers of the executive branch of the Establishment who are employed in supplying and distributing lymph. But since the labour of watching over the supply of lymph, and its distribution, now attaches to the inspector, and that of conducting the correspondence, to the registrar, the committee consider the sacrifice of time and attention required of the members of the Managing Board in superintending the executive department of the Establishment to be so slight, that the office of member of the Board may be considered rather honorary than burthensome.

Great importance is attached by some of the witnesses to the moral influence, and weight and authority, which it is supposed a Managing Board, composed of eminent medical men, will have in removing prejudices from the mind of the public against vaccination, and in rendering medical practitioners zealous to promote the practice. Other witnesses attach no importance to the supposed influence of such a Board, and think that whatever confidence is reposed in the Board depends mainly on its connexion with government. Looking to the demand which there is for lymph, and to the support, arising out of that demand, which is given to the London Vaccine Institution, the committee are led to believe that the prejudices against vaccination are greatly on the decrease throughout the country, and that the authority of the Managing Board is not necessary to enable vaccination to withstand these prejudices; but since, according to the plan which they intend to recommend, a Managing Board will not be attended with expense, they do not propose altogether to abolish it.

From the organization and system which are requisite to provide a supply of lymph and to distribute it, it is manifest that, in order to maintain the practice of vaccination, either the co-operation of individuals formed into a society, or the direct support of government, is necessary. From the correspondence which took place between the Treasury and the Managing Board of the National Establishment, in the year 1831, it appears that government had it at that time in contemplation to withdraw the annual grant of money voted by parliament, and to leave vaccination to be sustained by societies, depending for their support on private contributions. The want of stability in such institutions is the principal reason assigned for not confiding the guardianship of vaccination to such hands. One vaccine society, it is said, has been dissolved for want of funds; another, owing to dissensions among the subscribers; a similar fate is predicted to all future vaccine institutions; the possession is too valuable to be subjected to such risk. To these arguments it is replied, that former vaccine institutions ceased to flourish, because government became the stay on which vaccination rested for support; that in spite of this great disadvantage, vaccine institutions are still supported by the public; that should government cease to maintain the National Establishment, medical men and the public would immediately unite to preserve the vaccine disease, as a possession too valuable to be lost; and in that case, even should the public not lend its assistance, (as, from charitable motives it probably would,) medical men would incur the cost of preserving this specific, as they would that of procuring any drug.

Several plans for maintaining vaccination have been suggested to the committee by Dr. Gregory, Dr. Locock, Dr. Epps, and Dr. Webster; and among other plans, the committee beg to notice that submitted by Mr. Keate to the Home Office on the part of the College of Surgeons, who, in the event of the discontinuance of the Vaccine Board, proposed undertaking the superintendence of vaccination gratuitously, if government would continue to pay the stationary vaccinators.

In the plan which the committee are prepared to recommend, they do not propose at once to break up the whole of the National Establishment, which they think might be attended with injurious effects. They find it stated in evidence, that if the privilege were accorded to the hospital at King's Cross and to the London Vaccine Institution, of transmitting lymph post-free, that privilege, without any other support from government, would be adequate to give prosperity and permanence to those institutions, and to insure the maintenance of the vaccine disease in London. If this privilege be granted, and should be followed by those favourable results which are anticipated, it may be thought prudent at some future period to make some further reduction in the National Establishment.

The committee beg now to recommend,

That the Board for superintending vac-

cination should consist in future of two physicians and one surgeon; that all physicians and surgeons should be eligible respectively as members of the Board; and that the members should be appointed by the Secretary of State for the Home Department, to hold their offices during pleasure.

That considering that the duties of this Board are likely to be rather honorary than burthensome, the persons to be appointed members of the Board should before appointment be requested to signify their consent to perform the duties gratuitously.

That some of the regulations of the present Board should undergo revision; and that all future regulations of the Board respecting the supply of lymph to applicants, and the qualifications required of persons to be elected corresponding, extraordinary, or stationary vaccinators, should, before final adoption by the Board, be submitted for approbation to the said Secretary of State.

That the Board should have power to appoint an inspector, whose duty it should be to superintend the vaccinators, and to attend to the distribution of lymph; and a registrar, whose duty it should be to conduct the correspondence, and in case of the inspector's illness or absence, to officiate in his place; that such appointments by the Board should be subject to the approbation of the said Secretary of State; and that the salary of each of the said officers of the Board should be 200*l.* a year.

That the appointment of the stationary vaccinators, the fixing of their salaries, and of the number and locality of the stations, should rest with the said Board, subject to the approbation of the said Secretary of State.

That the following sums, appearing adequate, should be allowed to meet the charge of the remainder of the proposed Establishment: viz.

Rent of office	£100
Messenger	55
Miscellaneous expenditure	150

That, looking to the great disproportion which has for a long time prevailed between the numbers vaccinated at the different metropolitan stations, it should engage the attention of the Board whether the number and locality of the stations may not advantageously admit of some alteration.

That, in order to give some countenance to the other metropolitan institutions which are engaged in promoting vaccination, as well the hospital at King's Cross and the London Vaccine Institution, as the National Establishment, should be allowed the privilege, under proper regulations and restrictions, of receiving letters applying for lymph and of transmitting lymph post-free.

The expense of the National Establishment, according to the plan recommended by the committee, will be as follows:

Inspector	£200	
Registrar	200	
Messenger	55	
Allowance for office	100	
Incidental expenses .. .	150	
	——	705
Stationary vaccinators, but which will probably admit of further reduction	....	900
		£1,605

28th August, 1833.

REMUNERATION OF GENERAL PRACTITIONERS.

To the Editor of the Medical Gazette.

Sir,

As your valuable journal has a very extensive circulation amongst the general practitioners of medicine, perhaps I may be permitted, through it, to throw out a suggestion to that body; which, if acted upon, would, I humbly conceive, be productive of considerable advantage to them as well as to the community at large.

I think, sir, it must be universally admitted, that the present system of remunerating the general practitioner is bad in the strongest sense of the word: it is attended with evil consequences, generally speaking, to both patients and practitioners; and this is so obvious, that I may be spared from troubling either you or your readers in dwelling more particularly upon them. This, sir, being the age of reform, and the legislature being pledged to take the Apothecaries' Act into consideration in the ensuing session of parliament, the general practitioners, both in town and country, who are anxious to have themselves put upon a respectable footing, should lose not a moment in coming forward to prepare petitions for the removal of their grievances. Their petitions ought to be presented to both Houses on the meeting of parliament; when there can be no doubt of their being duly attended to.

It is ardently to be hoped that the leading members of this class of the profession will rouse themselves, and call meetings in every town in England and Wales, to adopt such measures as

seem meet for carrying their views into effect. If those practising in the metropolis were to set the example, there can be little doubt of its being generally followed in the provinces. It appears to me, sir, that if the general practitioners were by law entitled to make a fair charge for their advice to, and attendance on, their patients, as attorneys do to their clients, it would be equally advantageous to both parties. In the hope that you will devote a spare corner in your pages to the hint I have ventured to throw out to my professional brethren,

I remain, sir,
Yours, with all due respect,
A GENERAL PRACTITIONER.

ANALYSES AND NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Illustrations of the Effects of Poisons. By GEORGE L. ROUPELL, M.D. *The Plates from Original Drawings*, by ANDREW M. M'WHINNIE, M.R.C.S. Part I.

OF letter-press descriptions of the effects of poisons, there has been no lack since Toxicology first began to excite any degree of attention: but there has certainly been a great dearth of drawings and plates illustrative of the morbid appearances. From the specimen presented to us in the present fasciculus, we are induced to augur most favourably of the results to be expected from the united labours of Dr. Roupell and his very able coadjutor. There are only four plates as yet before the public, and it is intended that the whole work shall be comprised in four similar fasciculi. The execution of the plates is in the highest style of art; the character of the original drawings is preserved in all its softness and truth of colouring. Several of the subjects are to be taken from the effects observable in animals, and Dr. Roupell takes care to guard against objections to his not confining himself to man, by quoting the opinion of Orfila as to the similarity of appearances from poison in dogs and in the human stomach. The experience of every toxicological inquirer, we believe, will abundantly bear him out in this position.

In the first plate we have a beautiful delineation of the effects of a large dose of arsenic on the stomach of a dog; in the second, a similar illustration from the human stomach. The third plate displays the havoc made in a dog by a dose of strong nitric acid: the disorganization, with perforation of the coats of the stomach, is powerfully represented. And in the fourth we have a back view of the tongue and œsophagus of a boy, who died from accidentally swallowing a quantity of nitric acid. The work, we think, deserves every encouragement.

MEDICAL GAZETTE.

Saturday, October 26, 1833.

" Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

MEDICAL EDUCATION AND PROFESSIONAL GRADES.

ALTHOUGH we have not the vanity to imagine that the statement of our opinions will have any direct influence in procuring their adoption, yet we conceive the present no unfit period at which to make some observations on the all-important subject of medical education; and in doing this, as we shall show no blind deference to existing institutions, so neither, on the other hand, shall we follow the example of our contemporaries, who with rival eagerness strive, at this particular season, to gain the favour of those entering upon the profession, by representing their teachers as plunderers, and their future examiners as swindlers and oppressors. To us it has always appeared, that the outset of a journey was not the best moment at which to judge of the merits or demerits of the surveyor who planned the road; and we have therefore endeavoured to make our journal a vehicle of

instruction to our younger brethren, as free as possible from those appeals to their passions, a compliance with the suggestions of which would scarcely lead to the accomplishment of those objects for which they have been sent to the metropolis. It is their business at present to comply rigidly with existing regulations; it is the business of their seniors in the profession, as it will soon be their own also, to effect such emendations in the system as experience and dispassionate observation may shew to be required.

Three great divisions, or grades, of the healing art, have now for a long period been acknowledged in this country —whether wisely or not, it suits us not at present to inquire; and these are so firmly established, by usage, by courtesy, by chartered rights, and all the provisions of law, that they have become interwoven with the very constitution of society. No enactment, even if characterized by all the fervour which accompanies revolution, could annihilate the existence and practical operation of these divisions in our profession, though it might alter the designation given to them. Physicians, surgeons, and general practitioners, whether so called or not, will obviously continue in all those districts which have a population sufficiently opulent to remunerate their services; and the greater the demand for medical advice, the greater still will be the number of subdivisions, till we have, in larger towns, the addition of the ex-professo accoucheur, the oculist, the aurist, the dentist, and a long list of others. We have heard it repeated *ad nauseam*, that the healing art is "one and indivisible." Granted: it is a theoretical truth, and a practical fallacy. The elementary principles—the ground-work on which the superstructure should be raised—may indeed be identical; and the student ought, therefore, whatever he may intend to pursue hereafter, to begin by laying a good foundation. But this is trite and common-place—in fact a truism, which we are compelled to adduce, to show how far the idea of being "one and indivisible" is applicable to our profession. All proceeds from the same root, but the branches are very different. One man, from choice or accident, has his attention particularly directed to external maladies, and derives gratification from the obvious controul, whether by mechanical or medical agents, which he exercises over these diseases; and such person will of necessity become a surgeon. Another may carry his researches farther—may strive to interpret the manifestations of internal and hidden affections, and thus, becoming more familiar than the preceding with "inward complaints," will, as a consequence, be consulted in preference to the other in the cases called medical; and he would be, to all intents and purposes, a physician, were there no such appellation in the language. The names might be got rid of; the realities could not.

We assume, then, that physicians and surgeons will continue to exist — no very unwarrantable assumption,— and we hold further, that all the former should be under the control of the College of Physicians, and all the latter be amenable to the College of Surgeons. Most surgeons, indeed, are members of the College: they become *surgeons* in virtue of their diploma. So ought it to be with the physicians; they also ought to have a college, regulating their education — estimating their qualifications — conferring on them their designation — creating physicians. In a word, the College of Physicians ought to be to physicians what the College of Surgeons is, or is intended to be, to surgeons.

It ought to lie in the jurisdiction of the College of Physicians, to prescribe what courses are to be attended by the aspirant to their diploma, and to recog-

nise the teachers. The education prescribed ought to be of the most enlarged description: the professional part of it based on the general attainments required of English gentlemen; and the degree, constituting the holder a physician, ought not to be granted at the earliest under twenty-five; probably thirty would be a still more fitting age.

Now having observed that the root of all medical science is the same — that a preliminary knowledge of certain facts and principles must be acquired by all, whatever branch he may afterwards choose to cultivate — that the distinctions in medical science consist in differences of degree and direction rather than kind, so it would appear a rational and salutary arrangement that the denominations admitted among those who practise it, should have reference to the same circumstances — that a certain quantum of knowledge should be required of every one before he be allowed to exercise his art under any pretext with the sanction of the law, and that all should have proved themselves by competent trial to be possessed of this minimum of attainment before—aye, some years before, they are even admissible to examination for the higher department. It is a great absurdity that, as at present, a man who has entered into practice by the first avenue which the law presents to him, should find the exercise and cultivation of his art not only no step to a higher grade, but a positive bar to his advancement. Nor is it less repugnant to common sense, that a lad who has obtained his doctorate in Edinburgh, should, in virtue of such diploma, at once lay claim to the highest rank in his profession. We would obviate this anomaly by enjoining, that all should, in the first instance, prove themselves possessed of such general knowledge of the healing art, that they might practise it with safety to society; while it should not only be open to them to advance, but this first step should be made a necessary one (except to those already in the profession, before attaining a more elevated rank; and this minimum of qualification we would by no means raise above that at present required by the Society of Apothecaries: indeed we should be disposed to reduce it, as it appears to us that the expense of attaining it is too great in proportion to the remuneration which practitioners can, in some districts, obtain; and which districts, therefore, incur the hazard of being left to those who have had no medical education at all.

But probably there are few who would not aspire to the higher testimonials, and for them, of course, a considerably more elevated standard of qualification ought to be required; and this too at such an interval as to afford a reasonable period for the faithful accomplishment of the proposed object. The road to elevated rank in the profession ought to be narrowed; more maturity of years, and more extensive clinical experience, ought to be required; and the previous possession of the lower, ought to facilitate the attainment of the higher grade.

But while we would suffer those who are destined to practise among the poor to obtain their license to do so at a rate more proportionate to their future gains than we conceive they can at present, we would by no means render the access to our profession more easy than it is at present, as respects others. Various circumstances have of late years been in operation, which have tended to increase the supply of medical men, till it begins to exceed the demand: it is a popular principle to advocate whatever facilitates the diffusion of knowledge; but the diffusion of knowledge generally, and the cultivation of a particular profession, are two very different things; and it certainly appears to us no imaginary ground of apprehension, that if the facilities to entering the medical profession be far-

ther increased, they will tend to lower its respectability—to injure those who have already adopted it, and ultimately prove detrimental to the public, by driving those who have talent and the means necessary to its cultivation, into other less crowded paths to competence or fame.

PARLIAMENTARY REPORT ON VACCINATION.

We beg to direct attention to the very important document relating to vaccination which will be found in our present number. It has been expected for some time, but has only just been printed; and we have the satisfaction of being the first to lay it before the professional public. We shall probably take a future occasion of adverting to the subject more at length; but mean time we must take leave to protest, *in limine*, against the proposal, "that, considering that the duties of this Board are likely to be rather honorary than burthensome, the persons to be appointed members of the Board should, before appointment, be requested to signify their consent to perform the duties gratuitously." We really must say, that medical men do quite enough for the public gratuitously, without any fresh calls upon them. If the services to be performed by the Board be of importance to the country, they ought to be paid for, like other government offices; if they be not, then no Board ought to be appointed. At all events, some great necessity, and some important saving, can alone warrant the above proposal; but we find that the expenditure of the Vaccine Establishment, according to the arrangements already made, is 2,100*l.*, and the expense according to the proposed plan of a *responsible* but *gratuitous* Board is 1,605*l.*; so that the entire saving is under 500*l.*! Surely the country is not yet so near a bankruptcy as to require such a miserable gratuity as this at the hands of the medical profession.

ALDERSGATE-STREET DISPENSARY.

Dr. Gregory is this evening to bring forward a motion in the Westminster Medical Society, that the thanks of the profession be given to the late medical officers of the Aldersgate-street Dispensary.

It may be worth noticing that, in addition to the four who have taken office at this institution, a fifth candidate has announced himself within this day or two.

We have received the following letter from Dr. Roberts:—

To the Editor of the Medical Gazette.

Sir,

In your leading article of last Saturday, October 19, you have the following passage, in allusion to the resignation of the late medical officers of the General Dispensary:—"That the physicians and surgeons would have made a better figure in this business, had they shown less disposition to resume the places they had resigned, cannot, we think, be denied." As late junior physician to that charity, I hope you will allow me, for myself individually, to deny that postulate,—as I never would have re-accepted my appointment, unless I could have received it back again unshackled by the present, and newly adopted, noxious law of elections, and untrammelled by the annoying regulations recently enacted by the Committee of that Dispensary.—I am, sir,

Yours very obediently,
C. J. Roberts, M.D.

31, New Bridge-street,
Oct. 22, 1833.

CLOT BEY.

This indefatigable surgeon is in Egypt again. In a letter to the Editor of one of the French medical journals, he gives an interesting account of his proceedings since he reached Alexandria. The Viceroy, his great patron, received him with fresh marks of favour, conferring on him the place of President of the Council of Health, which had fallen vacant during his absence. Clot Bey found the influenza raging in Egypt upon his arrival: from Constantinople, he says, it has been traced to Smyrna; thence to Syria, Alexandria, Cairo, Suez, and the Heggiaz; and he conjectures that it may probably extend from Mecca to Hindostan. Both the influenza and the cholera, he conceives, ought to be reckoned at least as contagious as the plague. This terrible malady (the plague), he informs us, has

not appeared in Egypt for the last eight years, and it is doubtful to what its unusual absence is to be attributed; the Nile has been as various and as irregular in its inundations as ever; nor have the climate, or the manners, habits, and customs of the natives undergone any perceptible change. The enlightened Viceroy, with his usual attention to the wants of his people, has ordered civil hospitals to be built at Cairo, and in the meantime has thrown open the new military ones to the sick of both sexes. In a postscript to his letter, Clot Bey gives an account of some capital operations which he performed since his return. One of them was the extirpation of a scrotal tumor, which was complicated with a double hydrocele, and he was enabled to save the genital organs. The cure, he says, is complete.

CHOLERA IN FRANCE AND BELGIUM.

The cholera continues to prevail with considerable intensity at Brussels, and in several cities of Belgium. At the Hôtel Dieu, in Paris, only two cholera patients were received on the 17th, and none on the 18th, so that it is supposed to be once more on the point of being extinguished in the French capital.

WORKING OF THE ANATOMY ACT.

The following letter from Dr. Somerville—addressed to Dr. Hastings, of Worcester, and ordered to be printed by the Provincial Medical and Surgical Association—is so satisfactory, that we have much pleasure in laying it before our readers. We only hope that the account of the second season of the operation of the Bill may be equally gratifying.

5, Saville Row, 2d July, 1833.

My dear Sir,—I had anticipated, with much satisfaction, the prospect of being present at the ensuing meeting of the Medical Association at Bristol; not only from the opportunity thus afforded me of meeting you, and many of my old friends, but also in the expectation that the Bill which has been entrusted by Government to my care, might have received greater support, and be made more generally useful to my professional brethren, if its operation hitherto, as well as its provisions, were more generally explained.

Disappointed in the expectation, I have not hesitated to call your attention to this subject, knowing how much you have at all times at heart the advancement of your profession, and the education of those who are about to enter upon it.

The Anatomy Bill can scarcely be said to have been in operation from October last, for having been recently passed, before the commencement of the winter courses, the teachers, as well as the public, had to enter on a discussion, about the propriety of getting a supply from the sources contemplated by the Bill; yet it is a fact equally agreeable as it is surprising, that notwithstanding the natural abhorrence of the public at the bare thought of dissection, a Bill, essentially depending for its efficiency upon public feeling, should have met with such decided success. In London alone, upwards of 500 bodies have, during the last season, been supplied to the anatomical schools from parochial institutions.

To me it is more particularly gratifying to be enabled to add, that no untoward circumstance has yet occurred to give a moment's uneasiness to me; this is the more particularly gratifying, as it serves to shew that the system of management, while it affords the utmost protection to the public, has nothing in it to shock the feelings of the poor, while it at the same time is an effectual check to improper proceedings: this success I am led to attribute to the following circumstances:—

1st, Carrying with us the feelings of the overseers, and of parish authorities, by shewing them the necessity of protecting the study of anatomy.

2dly, The avoidance of every circumstance calculated to give a shock to the feelings of the poor, and for this reason the bodies have always been removed by undertakers, in coffins, as if for the purpose of interment; and on the burial of the remains, the utmost precaution has been taken as to the observance of the usual rites, with this difference only, that the appearances are made more respectable than those of paupers. Many of the more respectable inmates of workhouses, seeing the decency observed in these transactions, have voluntarily given up their bodies; and the relatives

of others, grateful to their parochial surgeons, have asked to have their bodies sent to the schools for partial examination, as it is termed, when the teacher is requested not to disfigure the features, and to return the body within fourteen days.

It is impossible for me to conclude this description without acknowledging, with pride, the unremitting zeal and anxious efforts of the Home Secretary, to promote, by every means in his power, the operation of the Bill, so as to make it of the utmost service to the profession. As to the provincial schools, there are difficulties which make me anxiously request the sense of the meeting, in regard to any suggestions which may appear to them calculated to remove them.

The obstacles in obtaining a supply in small towns are obvious; for not only are the guardians of the poor reluctant to incur the odium of assisting dissection, but the actual number of unclaimed bodies is necessarily very small. To this circumstance I am bound to attribute the want of success which has attended the school at Exeter, which I the more sincerely regret, because, during the many years I was attached to the school of anatomy in Windmill-street, I had the most convincing proofs of the proficiency of the pupils from that school.

The Act is so framed as to prevent the removal of bodies from one town to another; indeed, the risks which attend such removals so far overbalance any advantage, that, for the sake of the community as well as of the large schools, I believe such a permission to be highly inexpedient. It is to these difficulties to which I beg more particularly to call your attention.

It has often been suggested that the Act might be made compulsory; but the objections to this are very strong, as it would not only very materially increase the prejudice against dissection, but it would be assuming a power quite foreign to every liberal feeling; and I do not know on whom the Government could rely to carry such an Act into effect. As to almost all the other provincial schools, the success has been of such a nature as to give the most encouraging hope that, by a continuance of the good understanding between the teachers and local authorities, this most essential part of medical education will no longer be made to depend upon the violation of the grave, or the caprices of resurrection men.

So fully has the Government been impressed with the belief, that anatomy could not be prosecuted with safety until the practice of exhumation was put a stop to, that the most peremptory orders have been given for this purpose; and to the successful prosecution of several individuals engaged in this traffic, we owe much of the success we have attained.

In conclusion, I have only to offer my humble efforts in rendering useful the enlightened and liberal measure of Mr. Warburton, who, in every transaction in which the advancement of our profession has been concerned, has ever been the foremost to give his utmost assistance.

Believe me, my dear sir, with great esteem, yours most faithfully,

JAMES C. SOMERVILLE.

CLINICAL LECTURE

ON

DISEASES OF THE TESTICLE,

Delivered at St. George's Hospital, Oct. 16, 1833,

BY B. C. BRODIE, ESQ. F.R.S.

HYDROCELE—CONTINUED.

GENTLEMEN,—There were two or three circumstances connected with hydrocele of the *tunica vaginalis* which I had not time to mention in the last lecture, and to which I must therefore call your attention on the present occasion.

I said nothing respecting the treatment of that kind of congenital hydrocele which communicates by a narrow opening with the cavity of the belly, in consequence of the upper part of the *tunica vaginalis* not being as yet obliterated. In these cases it is impossible to say where the fluid is really secreted. If it were secreted by the peritonæum, it would run into the tunica vaginalis in the erect position of the body; if, on the contrary, it were secreted by the tunica vaginalis, it would, in the horizontal posture, run back into the belly. You need not trouble yourselves much to find the solution of this question, but simply pursue the following method of treatment. As soon as the infant is old enough to wear a proper bandage or truss, let one be applied, and let him continue to wear it until the neck of the *tunica vaginalis* is become obliterated. You are not to expect that wearing a truss will interfere with

the descent of the fluid from the belly into the *tunica vaginalis*. It will produce no such effect as this; but it will prevent a piece of intestine descending; that is, it will prevent a case of congenital hydrocele from being converted into one of congenital hernia: or if a hernia have already taken place, it will keep it up, and favour the natural disposition of the upper part of the *tunica vaginalis* to contract and become obliterated; thus converting the case into one of simple hydrocele. You will recollect that I mentioned before, that the hydrocele of children very seldom requires any kind of operation. If the child do not wear a truss, a piece of intestine will at some time or other pass through the opening, and then there will be a congenital hernia, which may perhaps annoy him for the rest of his life.

You will find in Desault's works an account of the method which he pursued in the Hôtel Dieu, at Paris. He made the child walk about till as much fluid as possible was collected in the tunica vaginalis; then an assistant made pressure on the groin, while he drew off the fluid by means of a trochar, and injected the hydrocele with wine and water, in the common manner. The object of the pressure on the groin was to prevent the fluid passing into the belly; but, of course, if the assistant were to be in the least degree careless, this accident might happen, and peritonæal inflammation would be the consequence. I need make very few comments on this method of treatment, because, after what I have told you, both in the last lecture and the present, you will perceive that it is entirely uncalled for. It is an operation that at the best must be attended with a certain degree of hazard, and on which it would be impossible to depend for the production of a cure, inasmuch as the injection frequently does not produce adhesion of the tunica vaginalis, in which case there would be nothing to prevent fluid secreted in the peritonæum from coming down into the cavity below.

When hydrocele of the tunica vaginalis begins with inflammation, you should let the inflammation subside entirely before you attempt to perform the operation by injection. In these cases you often find afterwards that the tunics of the testicle are considerably thickened, so that it appears as if there was hydrocele connected with a diseased testicle; and I have sometimes known a surgeon advise the operation by injection not to be resorted to on account of there being a diseased testicle, while in reality there was merely this thickening of the tunics.

You may, in many instances, distinguish a testicle which is indurated, in consequence of a thickening of the tunics, from a really diseased testicle, by the circumstance of the tunica vaginalis covering the epididymis being very much thickened, and forming a long projecting ridge; whereas, in a case of diseased testicle, the epididymis becomes confounded with the rest of the organ, and the projecting ridge, which it forms, where the membranes are thickened over it, is not perceptible. The mere thickening of the tunics of the testicle from previous inflammation, is no sort of objection to the operation by injection.

Sometimes, in a case of hydrocele, you find a loose cartilage in the cavity of the tunica vaginalis, similar to those loose cartilages which are met with in the articular cavities. I suppose that where this complication exists, the loose cartilage is the original disease; and it is this which, by moving about in the cavity of the *tunica vaginalis*, keeps up the secretion of fluid from the surface of that membrane, in the same manner that a loose cartilage in the knee-joint maintains an increased secretion of synovia from the synovial membrane, by which the joint is lined.

Where this complication exists, having drawn off the fluid, if you feel the loose cartilage, and can get it into some convenient situation, you may cut down upon it with a small scalpel or the point of a lancet, and take it out, and the hydrocele which it produced may probably then be cured; that is to say, the cause of irritation being taken away, the effects may cease. If it should be otherwise, when the hydrocele returns, you can inject it in the usual manner. Here [presenting it] is a preparation in which there is a large hydrocele with a loose cartilage in it. This was taken from a patient whom I saw occasionally for some few years before he died, and it was remarkable that on drawing off the water, there was always excessive pain as soon as the operation was over. He used to lie down on the floor, and groan with agony for a quarter of an hour. It was not known till after death that the tunica vaginalis contained this loose cartilage, the existence of which, in all probability, was in some way connected with the extraordinary pain which always followed the abstraction of the fluid.

I shall now proceed to another subject, that of

ENCYSTED HYDROCELE.

This disease is entirely different from that of hydrocele of the tunica vaginalis. It has nothing to do with that membrane, and may exist quite independently of it. In fact, you find precisely the same disease in other parts of the body. There is a membranous cyst, which is connected by

vessels to the surrounding parts, and generally only loosely connected, containing a transparent watery fluid. Such a cyst as this is not unfrequently found in the liver, and in some other situations. I have seen it imbedded in the loose cellular membrane of the neck, being, in the cases to which I allude, apparently a congenital disease. What I am about to give you is no theoretical history of the disease, for I have had frequent opportunities of ascertaining its nature by dissection.

The encysted hydrocele of the spermatic cord is a thin membranous cyst, containing a watery fluid. When the tumor is of a small size, it is moveable to a certain degree in the cellular membrane, but it ceases to be so when it has attained a large size.

Encysted hydrocele of the body of the testicle occupies a very remarkable situation, for it lies between the inner fold of the *tunica vaginalis*, and the fibrous membrane of the *tunica albuginea*. You will recollect that the *tunica albuginea* forms the immediate investment of the glandular structure of the testicle; that there lies over it the inner layer of the *tunica vaginalis;* and these membranes, under natural circumstances, adhere closely to one another. The encysted hydrocele, then, lies between them. At first you see it of a small size, like a grain of mustard; then it gets larger, and becomes the size of a pea; then it grows larger still, and so it goes on extending between these two membranes, and, as it were, splitting or separating them the one from the other.

Encysted hydrocele of the epididymis is situated between that organ and the inner layer of the tunica vaginalis, by which it is invested. You will remember that the epididymis is not covered by the tunica albuginea; and hence it is that the encysted hydrocele, in this case, lies under the inner layer of the tunica vaginalis, in contact with the epididymis itself.

The cyst of an encysted hydrocele is a thin membrane, something like a serous membrane, but thinner; at least it is so in the early stage of the disease. The fluid of an encysted hydrocele is different from that of hydrocele of the tunica vaginalis; being transparent and watery, looking almost like distilled water; and it contains no coagulable matter. If you hold it in a spoon over the flame of a candle, it does not coagulate like the serous fluid of hydrocele of the *tunica vaginalis*, but nearly all evaporates, leaving the smallest possible residuum of animal matter. Such is the kind of fluid contained in an encysted hydrocele, in at least nine cases out of ten. I have, however, once or twice known it to consist of yellow serum, like that of a common hydrocele.

Encysted hydrocele of the spermatic cord, as I have told you, lies imbedded in the cellular membrane, and is so loosely connected to the neighbouring parts, and so moveable, that, when it is of a small size, it may be pushed up towards the groin and down to the testicle, and may be made to move very freely between these two points. When the external abdominal ring formed by the tendon of the external oblique muscle, is of a large size, a small encysted hydrocele may be pushed through it; and hence it has frequently been mistaken for a hernia. I dare say I have known not less than half a dozen cases of encysted hydrocele, in which this mistake was made, patients wearing a truss to keep it up, and being much perplexed that they could not accomplish that object.

You may distinguish a small encysted hydrocele from a hernia in the following manner. You may push the hydrocele down to the testicle, and then feel the spermatic cord in the groin quite distinctly above the hydrocele. You may, it is true, push it upwards through the external ring, so that it may be lodged behind the tendon of the external oblique muscle, but you cannot push it back altogether into the belly, as you would a hernia. You find the tumor bulging out above, visible to the eye, and sensible to the touch above the groin, and behind the tendon of the external oblique muscle. Again, when the hydrocele has descended, so that it is below the groin, and the patient coughs, you cannot feel any impulse communicated to it as you can to a hernia.

Even when an encysted hydrocele of the spermatic cord has attained a large size, I have known it to be mistaken for a hernia. The testicle can be felt below, distinct from the tumor, and the latter extends in the groin quite up to the abdominal ring, and so far it is very like a hernia. You are to form your diagnosis thus: put your finger above the tumor, and press it a little down, and you feel the spermatic cord distinctly behind it; and then lay your hand on the tumor and make the patient cough, you do not find an impulse communicated to the finger, as would be the case if there were a hernia. When there is a hernia, if the patient lies on his back, the whole, or at any rate a portion of it, will go up into the belly, but a large encysted hydrocele does not disappear in the same manner. If ever you mistake either a large or small encysted hydrocele for a hernia, it must be from carelessness in your observation; for the distinction is sufficiently easy to those who take any trouble to make it.

Encysted hydrocele of the testicle, when it has attained a certain size, is perceptible to the touch through the scrotum, and

the testicle appears as if it were lobulated, as if it were a double testicle, so that I have known a person to come to me saying, "I believe I have a double testicle;" and I have heard even medical men speaking of patients whom they supposed to have a double or lobulated testicle. These are almost all cases of encysted hydrocele.

The encysted hydrocele of the spermatic cord gives the patient little or no pain; encysted hydrocele of the testicle sometimes gives the patient no pain, but in other cases it causes a great deal of pain. I suppose that where there is pain, it is chiefly in that variety in which the cyst lies between the *tunica vaginalis* and *tunica albuginea:* this hydrocele being closely bound down on the body of the testicle, between these two membranes, must necessarily keep up a constant pressure on the organ. Or perhaps it may be, that some nerve occasionally lies over the encysted hydrocele, and thus produces pain.

You may know at once the existence of an encysted hydrocele of the testicle, by taking a patient into a dark closet, or by darkening the room, and examining the part with a candle. You raise up the scrotum with the testicle in it, and hold the candle to the other side; and where the testicle is, there the light does not shine through, but where the encysted hydrocele is, there it does. You cannot so well examine an encysted hydrocele of the spermatic cord in this manner.

If the encysted hydrocele be of small size, I would advise you to do nothing for it: very often it will continue unaltered all the patient's life, never giving him any inconvenience; and if so, why should you meddle with it? It may, however, though it is generally very small, grow to a large size. Here [exhibiting a preparation] is an encysted hydrocele of the spermatic cord, which grew to a size sufficient, no doubt, to be very inconvenient to the patient. I have known an encysted hydrocele of the testicle to be even larger than this. I operated on a patient who had a very large hydrocele; it seemed like an encysted hydrocele, for the testicle could be felt on one side, while the hydrocele made a great tumor on the other; but, nevertheless, from the magnitude which it had attained, I thought it must be a hydrocele of the *tunica vaginalis*, and that the testicle was made to appear thus distinct from the hydrocele, in consequence of adhesions. However, I introduced a trochar and drew off the water, which I found to be colourless: it was such as I never met with in the cavity of the *tunica vaginalis*, and resembled what we always find in an encysted hydrocele. There were not less than two pints of fluid. This, it is true, is an unusually large quantity; but I have known it to contain six or eight ounces several times. In the majority of cases, however, the encysted hydrocele is not larger than a walnut. I attended one old gentleman who had had an encysted hydrocele of this size for forty years previous to his death, and it never gave him any inconvenience. Then, I say, that if the hydrocele be of a small size, and does not occasion any material inconvenience, let it alone; it comes to no harm, and there is no reason why the patient should be tormented with an attempt to make a cure. But if the encysted hydrocele be large enough to give the patient inconvenience from its bulk, you may, if you please, draw off the water with a trocar, and relieve him in this manner.

This operation for the simple abstraction of the water, is liable to the same objection as in the case of hydrocele of the *tunica vaginalis*—viz. the water will become secreted again, and the tumor will return. But, for the most part, the tumor in encysted hydrocele is slow in returning; so that the patient is generally relieved for a considerable time: so that a twelvemonth may elapse, or even more, before the hydrocele regains its original size. If the patient be not satisfied with this occasional relief, you will consider how you should proceed with a view to a complete, permanent, or radical cure. In children you may always cure the disease by the application of a stimulating lotion; but not so in the adult. In the adult, then, the question will arise whether you should have recourse to the operation of injection? I have performed this operation for encysted hydrocele, and have known it to have been performed by others, but I have witnessed no instance of its success. I will not say that it never has succeeded, but *I* have never known such a case. Within the last two or three years, a gentleman came to me who had a hydrocele that contained about eight ounces of fluid. He had had the fluid drawn off and the hydrocele injected by an eminent surgeon, eight or nine years before, but no cure had been effected; the swelling having begun to return as soon as the inflammation produced by the operation had subsided, and having gone on gradually increasing from that time to the period of my being consulted. I drew off the fluid and found it was colourless, without any coagulable matter; shewing that it was a case of encysted hydrocele. I injected the hydrocele; this being the second operation by injection. The cyst became inflamed, just as the tunica vaginalis would be inflamed, but there was no cure. I have seen the patient once or twice since, and the hydrocele is gradually, but

slowly, regaining its former size. Not long since, I saw another patient with encysted hydroeele; and a surgeon had injected it, but there was no cure. I injected the hydrocele in the case which I mentioned just now, where there were two pints of clear watery fluid; and a good deal of inflammation followed. I have not seen the patient since the inflammation entirely subsided; however, a surgeon who is his family attendant informs me that a collection of fluid has again taken place, though not so much as before the operation—that is to say, in other words, the disease is not cured, for the swelling is gradually but slowly returning. It may be worth while to mention an observation which I made in this case. Knowing it to be one of encysted hydrocele, when it began to swell up from the inflammation produced by the operation, I had the curiosity to puncture the cyst and draw off some of the fluid which had been effused into its cavity. The fluid now was quite different from that which had been secreted previously; it was an opaque yellow serum, like the serum produced by inflammation of the cellular membrane, or the peritonæum, or any other membranous surface. It is not the ordinary fluid peculiar to the encysted hydrocele which is secreted under the influence of inflammation, but the same kind of fluid that is secreted under the influence of inflammation in other parts.

There are two methods, which I have sometimes practised, for the cure of encysted hydrocele, one of which is this: I have laid it open and dressed the cavity with lint: under these circumstances the cyst inflames, suppurates, I suppose granulates, and thus becomes obliterated. Another operation which I have performed is this, and if you operate at all it is the one which I should recommend to you. Pass a seton through the encysted hydrocele. Have a curved needle carrying a few threads of silk, the silk occupying not quite so much space as the needle, so that it may pass readily, otherwise it is difficult to draw it through the hydrocele. Pass the needle through the centre of the hydrocele, having previously examined it by holding a candle behind it, so that you may avoid any vessels that lie in the way. Leave the silk in for for some days—we will say for a week. If the silk be larger than the needle, the fluid will not escape with sufficient readiness; but if it occupy a smaller space than the needle, then the fluid, although not discharged all at once, flows out gradually. The cyst collapses on the silk, which being an extraneous body, excites inflammation and suppuration, and the pus escapes along the side of the silk, as the water contained in the cyst did before. At the expiration of a week you withdraw the silk, and you find the cyst converted into a hard knob, or tubercle, about as large as the end of your finger. This tubercle is gradually absorbed, and thus the patient is cured. But a good deal of constitutional disturbance may follow even this simple operation, and therefore I repeat my former observation—do not operate for encysted hydrocele except it be really necessary. If the tumor give the patient inconvenience from its bulk, or if, from its particular situation it occasions much pain, as it sometimes does, there is no reason why you should not relieve the patient by using the seton; but if it really give the patient no inconvenience, it will be better that he should not have any attempt made for his cure.

MIDDLESEX HOSPITAL.

To the Editor of the Medical Gazette.

Sir,

The following cases present points of such peculiar interest, and are so rarely met with, that I am induced to send them for insertion in your valuable journal.

I am, sir, your obedient servant,

C.

Middlesex Hospital, Oct. 6, 1833.

Case I.—*Gangrene of the Lung—Dilatation of the Bronchi and Pneumo-Thorax.*

Eliz. Dunant, æt. 35, admitted under Dr. Wilson, in the Middlesex Hospital, April 24, 1833.

Countenance with a florid hectic blush; features sharp; dyspnœa and cough; expectoration of a rusty mucus; respiration wholly abdominal; lies only on the right side; frequent heats and chills; skin hot; pulse 120, wiry; tongue dry. On examination of the chest by the stethoscope, the following note was made in the case-book:—Percussion dull over the left side of the chest; no respiration in any part in front, feebly heard in the fossa of the supra spinatus; below this, a loud rush of air attended each inspiration, as if it entered a large cavity; over this part, distinct œgophony was heard; right lung free. She stated that she had laboured under cough more or less for four years, and was under medical treatment for pain in the left side a year ago. A fortnight ago, she was again attacked with pain in that region, which only obliged her to seek for medical aid two days before her admission

nto the hospital. She had not been bled, and taken but little medicine.

The above-named sounds altered in a few days in character: the inspiratory rush now more resembled the noise made by blowing into a large shell, called by Laennec *bourdonnement amphorique.*

The following diagnosis was made:—Solidification of the lower and part of the upper lobe of the left lung; fistulous opening with the pleura; air in a circumscribed cavity posteriorly.

The patient rapidly sunk, and died in two weeks from her admission into the hospital. The following were among the most important changes that ensued previous to her dissolution:—During the last four days, the bourdonnement amphorique became inaudible, and there was a total absence of respiration. A loud resonance of the voice in lieu of œgophony.

Inspection, 30 hours after death.—Percussion dull over the left side of the chest. The aqueous experiment for pneumothorax was performed, but no air escaped*, which was sufficiently accounted for by the general and firm adhesion in front of this lung; but from the angles of the ribs to the spine, the lung was free from adhesion. A most offensive odour escaped on opening the chest: over the lower portion of the pleura there was a large dark patch, like decomposition, and shreds of lymph were seen hanging in several parts, but one layer especially over the lower lobe, which had covered (but being now torn off, left exposed) two holes, the size of peas, leading directly into softened masses of pulmonary tissue. This lung, when incised, presented a dark grey colour, was very soft, and in many parts nearly fluid: it contained also several cavities, varying in size from a pea to a bean: in them was found a fœtid dirty-coloured pus. These cavities were formed by the bronchi; for, on tracing them, they were found to run for an inch, and then abruptly terminate, their edges having a ragged worm-eaten appearance, as if destroyed by the process going on in their vicinity: in other parts, the bronchi could scarcely be detected but by the touch, and some had become tinged of a dark purple hue.

The upper edge of the left lung and whole right were free from disease or tubercular depositions.

It would seem that the rapid decomposition and fœtid odour of this lung depended on the presence of air in the pleura; but that it was partially disorganized before this occurrence took place, may be inferred from the impermeable state of the large bronchi. The mere dilatation of these tubes, when unconnected with pulmonary disease, may exist many years without producing any serious symptoms, as is often witnessed in affections of the chest following hooping-cough; but if pulmonary or pleural disease does arise, the prognosis must consequently be far less favourable; for such unequal circulation of air in the lung will soon prove fatal, when it arises from the above causes.

A similar case is related by Laennec, in the 1st vol. page 222. M. Bayle calls it partial gangrene of the lung.

CASE II.—*Dilatation of the Bronchi from Hooping-Cough—Pneumo-Thorax.*

Eliz. Stock, æt. 19, admitted under Dr. Wilson, in the Middlesex Hospital, Sept. 18, 1833.

Countenance hectic; dyspnœa and orthopnœa occurring in paroxysms; cough; expectoration of a slimy, frothy mucus; respiration abdominal; lies wholly on the back; skin hot; pulse 120, and soft; tongue furred, dry; refers all her distress and pain to the left side.

The respiration was clear through the whole right lung, and in the upper lobe of the left; but below this there existed a large crepitous râle in every part. She stated that her breathing had been more or less affected since having the hooping-cough when a child, but that two weeks ago she caught cold, and a fresh attack of cough and dyspnœa was the result.

On the 26th, this state of the chest had undergone a marked change. She was lying on the *left* side, breathing laboriously; countenance livid; extremities becoming mottled, and cold; pulse fluttering; and expectoration less copious. There was now heard distinct metallic tinkling over the right lung behind; or the sound might be compared to that produced by sand passing over china or porcelain: this was only heard at each inspiration, and became inaudible when her position was altered. She died on the 27th.

Inspection 12 hours post-mortem. — The aqueous experiment, as in the last case, was performed, and from the right pleural cavity issued copious bubbles of air. On removing the sternum, the entire lung was found compressed against the spine, and the pleura dry. The lower lobe was easily inflated; but no air could be blown into the two upper lobes. After the most minute inspection of the pleura pulmonalis, no opening could be detected in it, neither was there any structural disease. Left lung was quite healthy in its upper lobe; but on cutting into the lower one, a gela-

* This is done after the French method, by laying bare the sternum and ribs, and collecting the integuments into a pouch, and filling this with water, and then puncturing the pleura, and the air rushes in bubbles through the fluid. This is more simple and distinct than when done with a candle placed before the punctured pleura.

tinous fluid oozed out from a series of cavities the size of large peas: these proved to be, and were formed by a dilatation of, the bronchial tubes. Each bronchus, after running about half an inch into the lung, gradually enlarged, and terminated abruptly in a cul-de-sac, constituting one of these cavities: some few were large enough to contain a small almond, and were within a quarter of an inch from the surface of the lung. The adjacent pulmonary tissue was healthy. In their course, these bronchi gave off smaller branches, that ran for the same space, and terminated in a similar manner.

The metallic tinkling, in the above case, could not possibly have been heard without fistulous communication of the bronchi and pleura; but as none such could be detected, it is difficult to conceive how the air found its way into the cavity. Neither Laennec nor Andral ever witnessed a case of pneumo-thorax that did not rapidly produce serious symptoms, and ultimately death; and these eminent physicians give credence to the opinion, advanced by some, of the pleura being capable of secreting air.

The fact of the lower lobe being still permeable to air, though suffering from the same compression as the upper ones, does seem inexplicable, for the whole lung being free from adhesion, the pressure of the gas must have acted generally on the pulmonary tissue.

On the subject of dilatation of the bronchi as a common result of hooping-cough, the cases detailed by Laennec, in vol. i. p. 214, &c. may be red with great interest, and much practical information deduced from them.

CASE III.—*Pneumo-Thorax.*

Mary A. Ives, æt. 16, was admitted on the 16th of January, under the care of Dr. Watson, with symptoms indicating cerebral disease. She died the next day, and the left corpus striatum was found to be extremely disorganized.

The chest had not been particularly examined during the few hours that this patient was in the hospital.

No symptom relating to that part had been complained of or noticed, except that she seemed to prefer lying on her right side.

Percussion on the dead body produced a remarkably hollow sound on the left side of the thorax; and a quantity of air escaped, with a hissing noise, when the pleura was punctured through one of the intercostal spaces.

The left lung collapsed by the side of the vertebral column: between it and the ribs was a large space, which did not contain a drop of fluid. The membrane, both costal and pleural, was perfectly dry, and free from vascularity. The lung adhered a little at its upper part to the contiguous walls of the chest; and near the point of adhesion a pin-hole aperture was discovered, which was traced to a flaccid empty tubercular cavity. The opening was so small, that it was not detected until the lung was put under water, and air was blown through the bronchi. The collapsed lung was quite flabby, and when cut through looked like muscle. All attempts to inflate it were ineffectual. There were several tubercles near its apex.

It would seem from this and similar cases, that the mere contact of atmospheric air does not necessarily occasion inflammation of the pleura.

DISLOCATION OF THE HUMERUS BACKWARDS.

To the Editor of the Medical Gazette.

SIR,

IN the Medical Gazette, for July 6, 1833, there is related a case of Dislocation of the Humerus backwards. The object of the present communication is to lay before your readers the facts of a parallel case, which occurred also at the Middlesex Hospital.

Catherine Stacey, æt. 74, thin and spare, was brought to the hospital, Sunday evening, Sept. 29th, complaining of an injury which she had received in her right arm half an hour previously, from a fall in the street. She trod upon some orange-peel, slipped, and fell on the fore part of the shoulder. She complained of no pain or uneasiness, but of incapacity to move the arm in any direction. The neck inclines to the injured side; and for ease, this hand is supported by the sound one.

Upon viewing the shoulder-joint, the nature of the injury was quite evident. The head of the humerus was seen on the dorsum, under the spine of the scapula, and might be readily felt and rotated. There was a marked depression or hollow opposite to the projection in the front aspect of the arm, namely, under the acromion. The position of the arm being the disputed point, is the most important symptom to note. It was undoubtedly seen to hang by the side, and was neither inclined forwards nor outwards.

As to reduction, this was easily effected by the house-surgeon and one nurse.

E.

Middlesex Hospital, Oct. 22.

ST. BARTHOLOMEW'S HOSPITAL.

Fungous disease of the Tibia — Operation of scooping out the morbid mass.

Henry Wilkinson, aged 38, of a pallid countenance, and a spare, emaciated condition of body, was admitted into Henry ward, August 7th, under the care of Mr. Lawrence.

The anterior part of the left leg, at about its lower third, was occupied by an elevated mass of fungoid disease, extending nearly half round the circumference of the limb. Its surface was irregular, presenting a kind of granulated, or cauliflower appearance, red and vascular, and secreting a thin ichorous sanies. It was unattended with any particular degree of pain; the edges were everted upon the surrounding sound integuments; and it moved freely with the extensor tendons of the toes.

Twenty years ago this man received a blow on the shin, which caused an abrasion of the cutis; a troublesome ulcer followed, which during two years resisted all attempts made to heal it. From that time he remained well, until within nine months previous to his admission, when he again received a blow on the cicatrix of the sore; ulceration recurred, and the growth just described sprung up.

The patient being indisposed to submit to any operation, until milder measures had been resorted to, the liquor opii sedativus, and subsequently tincture of iodine, and the ungt. potassæ hydriodatus, were employed as local applications. Baron Gräfe, on the occasion of his visiting the hospital with Mr. Lawrence, examined this case, and recommended the attempt to extirpate the disease without amputating the limb. The Baron stated that he had succeeded in removing disease of a similar character, and preserving the leg: he had taken away a considerable portion of the tibia, and, the fibula serving as a splint, the vacuity was in time filled up with cartilaginous matter.

The disease progressively increasing, Mr. Lawrence, with the concurrence of his colleagues, recommended amputation; but this proposition was rejected by the patient, who demanded the performance of some operation which would not deprive him of his limb.

On Friday, the 13th ult. Mr. Lawrence gave the pupils a succinct view of his opinions of the case. His previous experience of several examples of this disease, inclined him to judge that in the present case the growth originated from the periosteum and contiguous soft parts. Such was the case in an instance which occurred in the hospital the preceding winter, where, as the preparation in Mr. Stanley's museum clearly shews, the bone was not involved in the disease.

The uncertainty respecting the exact seat and extent of the disease, made the possibility of its entire removal a matter of doubt; and, in the event of this being effected, it was questionable whether the limb so preserved would not be a useless encumbrance. These considerations, together with the painful and tedious nature of such an operation, and the probable danger in which its performance would place the patient, induced Mr. Lawrence to propose amputation as a decidedly preferable measure. The patient persisting in his determination not to lose the leg, Mr. Lawrence appointed the following day for attempting the experiment of extirpating the disease.

On Saturday, at half-past twelve, the patient was placed on the table in the operating theatre. Mr. Lawrence commenced the operation by an incision through the sound integuments, at about four lines distance from the edge of the diseased growth, extending round the outer half of its circumference. The diseased parts were then dissected off the tibialis anticus, and extensor longus digitorum muscles, which were left exposed; a second incision was carried round the inner half of the growth, uniting the extremities of the first. On raising the outer portion of the diseased mass, it was found intimately adherent to the tibia: its removal was therefore effected by dividing it at its attachment to the bone. The operator then proceeded to extirpate the remainder of the malignant growth, which was found to originate in the medullary cavity. By using a large and strong knife, the diseased structure, which was soft, and of a loose fibrous texture, was removed: the medullary cavity was laid open by this proceeding to within half an inch of the ankle-joint—only the posterior shell of the bone remaining in that part. Every vestige of disease that could be come at was carefully scraped from the interior surface of this plate, and the edges of the tibia were removed by Liston's bone forceps, wherever any unhealthy appearance was presented. A portion of the disease extended in the interval between the tibialis anticus and the extensor tendon of the toes: in removing this, a large muscular branch of the anterior tibial artery was divided and tied. The operation being completed, dossils of lint were introduced within the chasm in the tibia, chiefly with a view of arresting hæmorrhage of the medullary artery, which bled very freely: the entire wound was covered with a portion of simple dressing spread on lint, and the patient, much exhausted by the severe suffering he had undergone, was placed in bed.

9 P.M.—Has suffered severe and constant pain since the operation.

℞ Træ. Opii, ♏l. statim.

15th.—Has passed a comfortable night, with several hours sleep; and is at present free from pain. The wound directed to be covered with simple dressing, over which a linseed-meal poultice is to be laid.

8 P.M.—There are some feverish symptoms, with a very frequent pulse.

℞ Mist. Salinæ, ℥iss. 4tis horis.
Olei Ricini, ℥ss. cras mane.

16th.—Febrile disturbance subsided; bowels several times moved by the castor oil: in the evening he became restless, and complained of want of sleep.

Træ. Opii, ♏xx. statim, et repetat. post horas tres.

17th.—Quite comfortable: wound looking well.

20th.—The wound presents a healthy, granulating surface: granulations are also arising within the cavity formed in the tibia, and secreting a healthy, puriform discharge. Upon the whole, his condition is highly favourable, and affords a reasonable prospect of a good result.

Up to the 1st of October the patient continued comfortable in health and spirits, and the wound presented a perfectly healthy aspect. On this day, however, it was observed that the granulations arising from the lower part of the chasm in the tibia, nearest the ankle-joint, were of an unhealthy appearance, and the character they have since assumed lead to a strong suspicion of recurrence of the disease.

3d.—There is a slight erysipelatous inflammation of the foot, accompanied with heat of skin, thirst, and frequency of pulse.

MORBID CONDITION OF THE PLACENTA.

M. Serurrier, of Paris, not long ago attended a lady in a labour which was severe, but ended favourably. Happening to examine the placenta, which he observed was rather voluminous, he found in its centre a scirrhous tumor, about the size of a pigeon's egg, which, upon being opened, displayed a quantity of a purulent liquid. About an inch and a half from the tumor an infinity of little granulations, of an equally scirrhous character, were perceived, and, on being pressed, gave out an oleo-purulent fluid. The labour had taken place at the end of the seventh month, and twins were born—a boy and a girl—both lively and well formed. But the placenta was *unique*.—*Gaz. des Hôp.*

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Oct.* 22, 1833.

Abscess	1	Inflammation	21
Age and Debility	26	Bowels & Stomach	5
Apoplexy	5	Brain	8
Asthma	6	Lungs and Pleura	10
Cancer	1	Insanity	3
Childbirth	4	Liver, diseased	1
Cholera	6	Measles	5
Consumption	70	Mortification	2
Convulsions	27	Paralysis	3
Croup	4	Small-Pox	5
Dentition or Teething	3	Sore Throat and Quinsey	2
Dropsy	9	Spasms	1
Dropsy on the Brain	14	Thrush	1
Dropsy on the Chest	5	Tumor	1
Dysentery	1	Venereal	1
Fever	4	Unknown Causes	66
Fever, Scarlet	6		
Gout	1		
Heart, diseased	3	Stillborn	9
Hooping-Cough	4		

Increase of Burials, as compared with the preceding week . . . 55

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N, *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Oct. 1833.	Thermometer.		Barometer.	
Thursday . 17	from 38	to 56	29·48	to 29·57
Friday . . 18	37	58	29·66	29·60
Saturday . 19	38	52	29·43	29·47
Sunday . . 20	27	49	29·49	29·46
Monday . . 21	37	57	29·40	29·38
Tuesday . . 22	39	57	29 56	29 62
Wednesday 23	39	61	29·45	29·57

Prevailing wind, S. W.

Except the 19th and 20th, generally cloudy; with frequent rain.

Rain fallen, 1 inch and ·025 of an inch.

Charles Henry Adams.

LITERARY INTELLIGENCE.

Dr. Marshall Hall is preparing for the press a translation of Cruvelhier's great work on Morbid Anatomy.

NOTICES.

The letter of Civis Medicus on several important points of medical reform has been received, and shall meet with our earliest attention.

An Eye-Witness gives us so good an account of the ridiculous proceedings at the Bolt-Court Society, that we only regret his letter did not reach us sooner.

Erratum.—In our leading article of last week, p. 88, *for* "It is true that the former of these publications (*i.e.* the *Lancet*) hastened to eat up his words," &c. *read* "It is true that *the Editor of* the former of these publications hastened to eat up his words."

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 2, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture IV.—*THE PELVIS.*

PELVIMETERS, *continued.*

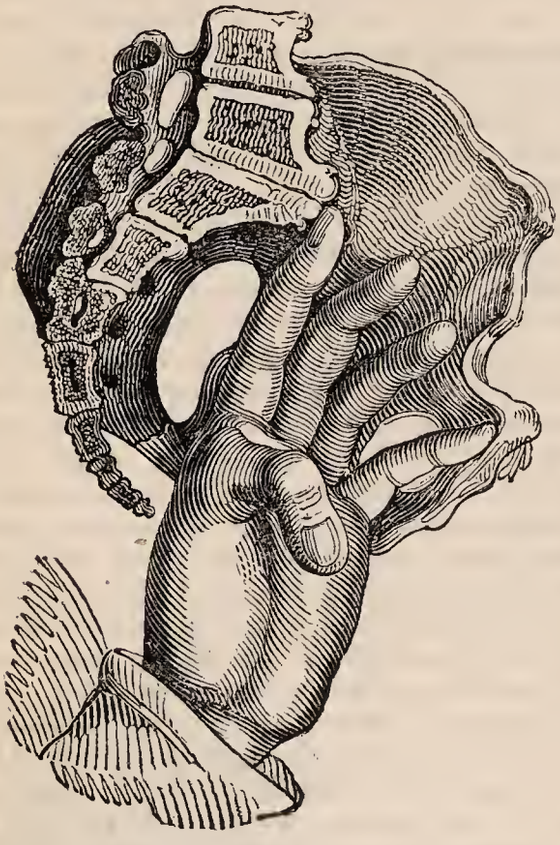
At the close of the last lecture we learned that our Gallic neighbours had displayed considerable ingenuity in the formation of instruments for the purpose of measuring the pelvic brim during labour; and you might have gathered from my observations, that I considered these means, however ingenious they might be, practically valueless. Pelvimeters, then, have not been generally introduced into use in Britain; and even if they ever were partially employed, they are now totally exploded. English practitioners are perfectly satisfied with the pelvimeters which nature has herself afforded them: our fingers and our hand are all the instruments which we require for this purpose.

Various modes of examining the dimensions of the pelvis.—I cursorily mentioned that there were three methods by which we had been recommended to examine the size of the pelvis, without the use of any artificial instrument. One mode is by the first finger of the right hand, introduced as in a common examination, so that its point may touch, or approximate near to, the promontory of the sacrum, while the root of the finger is applied exactly under the symphysis pubis, at the upper part of the arch. Now it is evident from the pelvis before me, when I place my finger within it in this way, that a man must possess one of extraordinary length to be able to reach the promontory of the sacrum, provided the pelvis be of standard dimensions. I have a longer finger, I believe, than belongs to any of my acquaintances, yet you see what an interval there is in this, a common-sized pelvis, between the tip of my finger and the promontory of the sacrum. Indeed, there are very few persons whose first finger is above three inches long on its inner edge, from its junction with the second to its point, whereas we have described the brim of the pelvis to be four inches in the direct antero-posterior diameter; and of course an oblique line drawn from the lower edge of the symphysis pubis to the promontory of the sacrum would measure somewhat more. If the pelvis be much distorted, the sacral promontory can

This engraving represents the finger introduced into a small pelvis, in the manner described.

certainly be easily felt by the finger thus introduced; but we have not even then the dimension of the direct conjugate diameter afforded us; we have an oblique line, and we must make a calculation of the difference between the length of the oblique and the straight line—which it is not always easy to arrive at—before we can obtain a correct knowledge of the diameter in a transverse direction.

Another mode has been recommended, viz. the introduction of the whole left hand into the pelvis, with the outside of the little finger touching the back part of the symphysis pubis, and the first finger placed against the promontory of the sacrum.

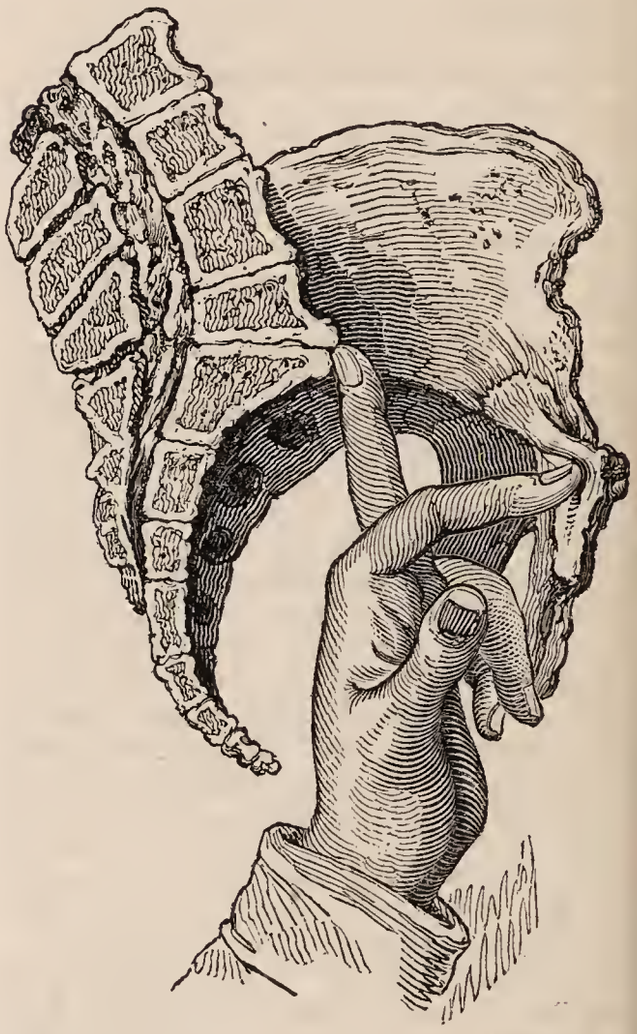


The whole left hand introduced across the brim of a common-sized pelvis, to measure its dimensions.

As every man knows what his hand measures across, he will be able to ascertain the transverse width. Thus if I find my hand only just fits in this situation, I shall know that there is less than three inches, because my hand is only two inches and three-quarters wide, which is the common average. Again, if I find I can only introduce three fingers sideways, instead of four, I shall know that the pelvis does not measure more than two inches, and probably not so much. If I can only introduce two fingers, I shall know that there is not more than an inch and three-eighths. But if, on introducing my whole hand, I should be compelled to spread my fingers widely before I can touch the sacral promontory, I shall then know that the pelvis is more than three inches, probably four, or near it.

But this mode of inquiry it is not always very easy to follow, because the child's head generally occupies some portion of the pelvis, even when the brim is contracted; and we cannot carry the hand up in this way, and make the accurate examination which we require, when the child's head is partially protruded through the brim, and engaged in the upper part of the cavity. It might, perhaps, be employed with advantage, provided the deformity be excessive.

The third mode is that which I myself adopt, and which I would strongly recommend to you, viz. that you should introduce two fingers of the left hand within the vagina; that you should place the fore part of the first finger exactly behind the symphysis pubis, and carry the tip of the second against the promontory of the sacrum.



The two first fingers of the left hand introduced into a common-sized pelvis, as recommended.

In a common-sized pelvis even, there is little difficulty in reaching the promontory, by stretching the fingers in this way; and we are enabled to ascertain by the distance between them the exact dimensions of the pelvic brim. We may withdraw our fingers in the same position, and measure off the space between their extremities on the first finger of the right hand, as with the limbs of a pair of compasses. If you please you may follow out the practice I pursue still farther. I always carry about with

me a female catheter, which no obstetrical practitioner should ever be without. Upon this catheter I have marked, in very faint lines, inches and half inches, and I can measure the exact diameter of the pelvis at the brim, by applying this little instrument to my fingers. It is not difficult to accomplish this mode of examination, even when the head is partly engaged in the pelvis, because the protruded portion is situated between the two fingers, and we have no trouble in passing one before, and the other rather behind it; it is by far the easiest mode of the three. Where there is a small pelvis, there is no difficulty whatever; and where the pelvis is about the common size, or a little below it, there is less than in either of the other methods.

Importance of discriminating the promontory of the sacrum.—But you must be capable of discriminating the promontory of the sacrum when you feel it; this is a matter, believe me, of no small importance. You might think it was very easy to distinguish, and so indeed it is, to a man given to reflection, or who has seen any thing of practice; he at once knows that it is the promontory of the sacrum that he feels and touches; but I assure you that, over and over again, it has been mistaken for the head of the child, and perforating instruments have actually been proposed under that idea; nay, I once met with a case myself, where this bony projection was mistaken for the fœtal head.

Examination of the cavity of the pelvis.—Well, then, although it is at the brim that we usually find the pelvis diminished in capacity, when one part of it only suffers distortion, yet sometimes the cavity, and at others the outlet, becomes the subject of contraction, while the brim is well shaped. After having made an examination, then, of the brim, in the way I have recommended, let us next examine, as carefully, the cavity. Let us run our finger, not rubbing it, but gently along the sacrum, to ascertain that it possesses its due curvature; let us see that the spines of the ischia do not jut too much inward; and afterwards, if possible, let us determine the space between the *tubera ischiorum*, and then we have gained all the information we can possess of the pelvic capacity, while the woman is living.

Classification of pelves.—Having had it demonstrated to us that there is such a thing as deformity of the pelvis, that there are differences in the size of this organ, it will next naturally follow, that we should endeavour to form some classification, so far as is useful in practice. I have therefore been accustomed to divide pelves into *four gradations* or *varieties*. But when I mention these gradations, I beg you will understand that I do not mean to say that every pelvis which you take up must measure this or that diameter, because there is an infinite variation in degree; but that there are these four varieties worthy of being retained in the mind for purposes of practical utility.

The *first* gradation, then, which I make, is the standard pelvis, or any thing above it; and we will take the brim as being that part an attention to which is of the chief importance. In this gradation the brim is five inches in the lateral, and four inches in the conjugate diameter, or more; and through such a pelvis a child will pass easily.

The *second* gradation is any pelvis lower than the standard, but sufficiently large to permit the child's passing alive; either being propelled by the action of the uterus, and the powers of nature alone, or extracted by means of instruments which are perfectly compatible with the preservation of its life, and the safety and integrity of the woman's structures. Now it is possible for a child to be thus born alive, if the pelvis possess three inches in the lateral by three inches in the conjugate diameter. Some practitioners, indeed, among whom I may mention Mr. Barlow, have thought that a pelvis measuring only two inches and three-quarters in its conjugate diameter, would permit the head's passing whole, provided there was sufficient room laterally. My own opinion, however, decidedly is, and that derived from clinical observation, that it would be almost impossible to propel the head of a common-sized fœtus, at full maturity and well ossified, through a pelvis containing less than three inches from the fore to the back part, even although it might measure five or six inches laterally. My second gradation, then, is limited to three inches by three in its lowest proportions. In looking at those pelves which are distorted antero-posteriorly, we shall generally find that the lateral diameter measures as much, pretty nearly, if not more, than in the standard pelvis; but there is a corresponding diminution of space in the conjugate diameter; and we have already seen that it is to the diminution of space here that the difficulty is generally attributable.

Then the *third* gradation is such a sized pelvis as would admit of a well-educated obstetrician extracting a fœtus through it after craniotomy has been performed—after the skull has been perforated and the brain evacuated. Now most obstetricians agree pretty nearly as to the three inches in the second gradation, but this third has given rise to considerable controversy. Some say that a child can be brought, after the operation of craniotomy, through a pelvis of little more than an inch; others denying that position, and contending that it requires

a much greater space. Perhaps this disagreement may, in some degree, depend upon the tact which the operator possesses. A man who is in the habit of using obstetrical instruments, will be able to extract a child through a smaller pelvis than one trying for the first time. This may in some measure account for the discrepancy in opinion among practical men. I will, then, take the liberty of forming a third gradation of my own, according to my own ideas; and I believe, that unless the pelvis possess three inches in the lateral, by and inch and three-eighths in some part of the conjugate diameter, clear, it is impossible to bring a child through its cavity even after the performance of craniotomy. If it do not possess a space of more than two inches and a half laterally, which is very seldom the case, we must then have at least an inch and a half in the conjugate diameter; but I am fully persuaded that unless it contains an inch and three-eighths—perhaps an inch and a quarter, but I would rather say three-eighths—in the conjugate diameter, through such a pelvis, a child, at its full development, and perfectly ossified, cannot be brought even by the most experienced obstetrician. In this [presenting it] there is a space of nearly two inches at one point, although it is much deformed; andI have no hesitation in saying that I could deliver a woman through it, unless the soft parts were very tumid, and occupied more room than usual. But here [exhibiting it] is another having a space of not more than an inch and a quarter on each side, and an inch at the promontory of the sacrum; and through this, in my opinion, no child could be drawn.

The *last* gradation, then, of the pelvis is any thing below three inches laterally, by an inch and three-eighths antero-posteriorly; through which space a child cannot be brought by the most experienced obstetrician, even after the head has been opened and the brain extracted; and in which case it would be necessary to have recourse to the almost universally fatal operation of the Cæsarean section.

A very large pelvis not without disadvantages.—From the observations which I have had the honour to lay before you, gentlemen, it cannot but forcibly strike you that no greater evil can befal a woman in this life than the infliction of a small pelvis; and you might probably infer, that no greater blessing could be provided for her than an unusually capacious one. But in this reasoning you will be sadly mistaken: a very large pelvis, so far from being a great blessing to a child-bearing woman, is (though not so great a curse as one below the standard size) not without its disadvantages—nay, without its dangers—both to the mother and to her fruit.

One of the most common accidents to which a woman with a large pelvis is liable, is the descent of the gravid womb. Now we know (at least we shall hereafter learn) that the uterus, after it has become impregnated, remains in the pelvis for a certain time; it then rises through the brim by degrees, till at length it occupies the abdominal cavity. If, however, the pelvis be sufficiently capacious to give it lodgment for a longer period than should naturally be, it is allowed, by its own weight, to sink lower than it ought, and there is consequently so much more pressure on the nerves and blood-vessels within the pelvic cavity; nay, the womb, with its contents, has even been known to prolapse through the external parts, hanging like a large tumor between the thighs, inverting the vagina, dragging down the bladder, and also to a certain degree the rectum. We must therefore consider that women who have pelves of extraordinary size are subject to the chance of an undue subsidence of the uturus during gestation—to prolapsus and procidentia.

Another inconvenience is almost universally recited by authors, as one to which women with very large pelves are more particularly liable: I speak of retroversion of the gravid womb; when the fundus, instead of rising into the abdomen from the cavity of the pelvis, is turned back upon the promontory, or falls down into the hollow of the sacrum; an accident which always produces great disturbance, and was mostly, until better understood, attended with fatal consequences. A woman, then, who owns a pelvis of unusual size, is supposed to be particularly obnoxious to retroversion of the uterus. I shall hereafter tell you, and adduce some circumstances in proof, that this generally received opinion, so far as my experience has taught me, is incorrect. By far the greatest number of cases of this description that have come under my own notice, have happened to patients who possessed pelves rather under the average width in the conjugate diameter than above it. Certainly that woman who has a good standard pelvis is less liable to this misplacement than if she had a large one; but, as I have just said, the majority of instances which I have met with have occurred to persons whose pelves have been smaller than ordinary.

But a third inconvenience, and one of no trifling moment, is the rapidity with which a child will sometimes be expelled through a pelvis of unnatural capacity, provided other things favour this occurrence. If the soft parts are relaxed, the os uteri

opened, the vagina and perineum easily distensible, and the dimensions of the bony canal preternaturally great, it is possible that the child may be propelled into the world so rapidly that no assistance can be rendered. A woman has been known, I might almost say, to drop a child, while moving across the drawing-room, while riding in a coach, while walking in the street, under circumstances in which her own life as well as the infant's must be brought into some degree of hazard.

Now the possibility of such an occurrence is worth being borne in mind, not only that we may guard our married patients, if we know they possess a large pelvis (and we may know it by having attended them in labour previously), against the chance of the child suddenly emerging into the world, but in a judicial point of view also. It may be the means of saving a life, that might have been unjustly sacrificed, if we reflect how rapidly the process of labour has been accomplished in some instances; and that what has once occurred in nature may possibly occur again. We will presume, then, that a young unmarried woman has unfortunately been entangled by the snares of one of our own sex, and that she finds herself impregnated: from the modesty inherent in the female character, she is unwilling that her shame should be divulged — she fully intends to acknowledge her misfortune before her expected accouchement, but puts it off from day to day, with a natural aversion to make a confession which must drive her from the society of her friends. Probably she may have miscalculated the time at which she expects to be delivered, or perhaps she may be seized with parturient pains rather prematurely. She feels a rumbling in her bowels — by no means uncommon at the commencement of labour; — she fancies she has an inclination to evacuate the rectum; — she retires to the garden for that purpose; — she finds strong pains come on; — she is unable to leave the seat on which she has placed herself; — the vagina and the external parts are very much relaxed; — the uterus acts forcibly; — and the child and placenta are propelled out together into the mire below. She is aware then of what has happened; — she hears no scream; — she has but a very few minutes in which to take a final determination; — she wishes to hide the occurrence; — she comes into the house again; — returns to her friends; — makes the best story she can for the appearance of her linen; — and for a time every thing is hushed. By and by, suspicion arises; it is possible the place may be emptied, and the child is found. A cry of "murder!" is raised; she is suspected first, then indicted, dragged into a court of justice, and upon medical testimony will often depend her life.

That a girl inexperienced in the feelings of childbirth may be unaware of the approach of labour, is sufficiently evident to require no illustration; but I cannot help enforcing the position by relating a short anecdote: — I was in attendance on a lady who had borne a number of children, and had generally suffered protracted labours. I had just made an examination, and found the os uteri but little dilated. I was standing by the fire in her chamber, in conversation with a female relative, who was anxiously watching over her, when I was requested to leave the room, in consequence of an inclination my patient felt to evacuate the rectum. I had scarcely retired when I was summoned back again, and to my surprise I found her sitting on the night table, and both child and placenta lying in the pan beneath. In this instance the infant was saved: had the same accident happened in a closet, it would most probably have lost its life. This case shews both the rapidity with which the parts occasionally become dilated, and also how much the mother herself may be deceived in her sensations. Nor is this the only instance of the kind that I have witnessed; but another very similar has also come under my own immediate notice.

It is very possible, then, that such an occurrence may take place as I have attempted to bring before you, and under such circumstances let us always lean to the side of mercy. We must not, and we dare not, as we value our oath, state what we know to be untrue, and we should be equally criminal if we withheld any knowledge that we possessed bearing on the case: we are bound to give in evidence that such rapid labours have occasionally happened, and it is for the judge and jury to grant the poor creature the benefit of this information. Let us treasure up these facts in our recollection; we may hereafter, perhaps, derive much consolation from their application.

DISEASES OF THE PELVIS CAUSING DISTORTION.

I shall now proceed briefly to mention some of the diseases to which the pelvis is more particularly liable; and first, I shall treat of those affections by which distortion of the organ is produced. These diseases are principally two; indeed, I may say entirely two; — for I like to speak positively and plainly when it is possible, without reservation or ambiguity. We will say that, independent of exostosis and fracture, there are two diseases by which the bony pelvis becomes diminished in

capacity; these are *rickets* and *mollities ossium*—the former being a disease of childhood, and the latter a disease of adult age. They both consist in a want of a due proportion of osseous matter. There being more animal than earthy matter entering into the composition of the bones, and there being less earthy matter than there ought to be, they yield like softened wax, the symmetry of the organ is destroyed, and these unfortunate distortions are produced.

RICKETS.

History.—First, then, a few words on rickets. Glisson was the first person who described this affection, which he did in a treatise *De Rachitide*, published in 1659; so that we have no account of the disease further back than 200 years. It is not at all noticed by the ancients, and it is supposed that they were ignorant of its existence. It is more probable, however, that the disease has sprung up with the spread of luxury and the growth of the mechanical arts, else it could not have escaped the acuteness of the physicians of olden times. Rickets,then, must have been a very uncommon affection in the early ages of the world, even if it existed. Most physiologists are of opinion that it is confined to the human species. Barlow, however, in his Essays on Midwifery, tells us, that quadrupeds are liable to it, as well as the human subject; that he has known many young pointers suffering under it, from not having sufficient nourishment. This is contrary to the opinion of Osborn, who said that so far as his observation extended, it is pecular to mankind.

Proximate cause.—The proximate cause of the disease, or that in which it consists, is a want of the due secretion of the phosphate of lime, which constitutes the principal earthy ingredient in the formation of bone. Dr. Davy, the very ingenious brother of the late President of the Royal Society, has given us a somewhat new theory of rickets, or rather of the softening of the bones. He says the cause is not so much that there is a want of lime, as that there is an exuberance of phosphoric acid in the system. Now, as he states, truly enough, the phosphate of lime is an insoluble salt, and it is deposited in proper situations in the bones for the purpose of giving them solidity; but if we add an increased quantity of phosphoric acid, the phosphate of lime is converted into a superphosphate, which is a soluble salt, is taken up by the fluids, and circulated in the vessels of the body; and that, therefore, the bones are deprived of their strength, because what ought to be insoluble has, by the addition of an increased quantity of phosphoric acid, become a soluble substance. This is a very ingenious view, and may be a true one.

Remote causes.—With regard to the remote causes of the disease, many have been assigned at various times. At one period it was thought that rickets was dependent upon syphilis. This opinion was more owing to the period at which rickets and lues venerea were first described, than to any decided connexion between the two diseases having been discovered by practical men. Lues venerea was first treated of in England in 1579, by "G. Baker, Maister of Chirurgerie." Some authors, indeed, on the continent, had made it the subject of essays previously to that time. Hence it is probable that it was not till 40 or 50 years after it had been noticed, that rickets began to attract attention. The opinion, however, is evidently founded in error, and we are now persuaded that rickets has no connexion with a syphilitic taint in either parent. The milk of a rickety nurse has been said to be another remote cause. Even to this day it is a common prejudice for a mother, who requires a wet nurse, not to engage a person at all deformed. I do not myself believe that the milk of a woman who has been the subject of rickets in early life will necessarily produce the same disease in the child she suckles; but, inasmuch as the constitution of rickety females is seldom strong, even during the whole continuance of life, such a woman should not be chosen. Again, it has been said that the acid contained in the human milk is the remote cause of this disease. It has been demonstrated by chemical analysis that the human milk contains a larger quantity of free acid—the lactic acid, than that of most animals, and it was therefore argued by some physiologists that this acid was the cause of rickets. This is certainly not a necessary inference; and if we follow the opinion of Mr. Barlow, that other genera besides the human subject are liable to rickets, we must discountenance the idea. There can be no doubt that the disease is sometimes hereditary, and persons who have a scrofulous habit are more frequently attacked by it than those who have not. We know that scrofulous parents commonly beget scrofulous children, and we may suppose therefore that scrofulous parents will produce children who will become rickety. But of all the remote causes which lead to this disease, the most frequent are, feeding infants, who ought to live upon the breast-milk, with improper farinaceous food, and keeping them, when children, pent up—in a factory, for instance: obliging them to remain in one posture the principal part of the day, breathing a vitiated

atmosphere, without the opportunity of suitable exercise, and in many instances, I fear, with an insufficiency of nourishment.

Period at which it occurs.—This disease scarcely ever appears during suckling. It is therefore not so much one of infancy as of early childhood, and it seldom shews itself after a certain age: perhaps we may say that five or six years is the extent. It is generally first discovered from a year and a half to two or three years old.

Symptoms.—The symptoms are these:—we almost invariably observe a peculiarly large head, a very prominent forehead, and the fontanelles (particularly the anterior) are longer in closing than is usual in most children. These are the first external marks which we perceive. The health soon declines; the appetite is generally bad: at other times, however, it is very voracious. The pulse is quick, the countenance pale, the stools are frequent and loose, and considerable emaciation of the body takes place. By degrees the abdomen becomes tumid; sometimes it is hard, and has a solid feel; in other cases tense, like a drum. The wrists and ankles become enlarged, the ribs flattened, the sternum extended outwards, the spine crooked, and then distortion of the legs and pelvis supervenes. During the progress of the disease, distention is mostly slow. All this shews a want of power in the system, an inadequate assimilation of the nourishment afforded, and a particularly tardy deposit of bone: some of the symptoms, indeed, indicate mesenteric obstruction, and perhaps glandular enlargement.

Treatment.—The remedies are such as are likely to improve the general health, and we may carry forward our indications as well through the stomach as by means of external applications. We must attend particularly to the *primæ viæ*—we must take care that the bowels act regularly and properly—not only daily, but satisfactorily. There should not be merely a scanty stool in the course of the day, but the lower bowels should *empty* themselves once in the twenty-four hours; which is a point, particularly in children, not sufficiently attended to. Whether a daily evacuation occurs or not, it is right to give some gentle purgative medicine—a dose or two of calomel may be exhibited in the first instance, and afterwards a slight course of some milder preparation of mercury may be entered upon; not to produce ptyalism, because that would increase the debility, but to correct the secretions. Then, when we have got the secretions into a more healthy condition, we may begin with tonic medicines, and first try the bitters. Bark is very good, and particularly that elegant preparation, sulphate of quinine. Perhaps the most efficacious medicine, however, is steel: the muriated tincture, or the vinum ferri, is usually given; but we can seldom get young children to take either for any length of time, on account of their nauseous taste. A much less disagreeable form is now a good deal in use, introduced by Mr. R. Phillips, well known by his Strictures on the Pharmacopœia; who was once a lecturer on chemistry at this hospital;—I allude to the aqueous solution of the tartrate of steel. It may probably be obtained at every druggist's, but it was first made at the shop of Mr. Edinborough, of the Poultry. It may be given in the same doses, or rather larger, than the tinctura ferri muriatis, and is much more useful, because it is not so unpleasant. Inasmuch, however, as it is a watery solution, it will not keep for any great length of time; if, therefore, you wish to have it in your own laboratory, a small quantity of spirit should be added to it. The carbonate of iron is also a good medicine, and we have little difficulty in administering it to children, mixed with honey or treacle. You may give from ten to twenty or more grains, three times a day. The sulphate of iron, I think, is inadmissible; at least it is not so desirable as the other preparations. There is another medicine which we may perhaps give with advantage—lime. Whichever theory we choose to adopt as to the proximate cause of the disease—whether the want of phosphate of lime or the super-abundance of phosphoric acid, so that a super-phosphate is formed—this medicine would seem to be indicated. We cannot give it in any large quantity, but lime-water may be mixed with milk to form a common beverage. I will not say much upon diet; but let the child have that which is most easily assimilated—jelly, broths, light meat, eggs in any form, and milk; small quantities of wine, or good malt liquor, may also be allowed. At the same time, let us not neglect external means. The child must breathe a purer air than that to which it has been accustomed. If it be in a town, send it to the country; if it live in the country, send it to the sea-side. Let it have moderate exercise under pleasurable circumstances; let it be plunged into a cold-bath, if it can bear it, or bathed in the sea. With regard to exercise, it is a matter of great consequence, while the bones are soft, that the child should not be much upon its legs. This is highly important in regard to a male child even, but how much more so in regard to a female, when, by permitting but a slight diminution in the size of the pelvis to take place, we entail such misery for life? Let us be particular in not allowing the child to

stand much, nor to sit in the nurse's arms more than can be helped, but keep it lying as constantly as we can.

MOLLITIES OSSIUM.

The other disease to which I shall call your attention is mollities ossium—an affection more rare than rickets, but still one which we sometimes meet with in a very aggravated form.

Proximate cause.—This is a disease of the adult, and it consists in an absorption of the earthy matter from the bones of the body. After deposition has taken place, and the skeleton has become fully ossified, and all the parts are as firm as they naturally should be, the bones begin to lose their osseous matter, and can neither support their own weight, nor that which is super-incumbent upon them. Here also we may perhaps be inclined to favour Dr. Davy's theory. We may suppose that, from some particular circumstance of constitution, an increased quantity of phosphoric acid is generated, under which the super-phosphate of lime is formed, so that the solidity of the bones is destroyed. This affection is commonly supposed to be confined to the human subject, but Denman relates that John Hunter informed him that one of the old lions in the Tower had died of softening of the bones.

One of the best published cases of mollities ossium that I have ever met with, is given in the fifth volume of the Medical Observations and Inquiries, by Mr. Thomson, who was surgeon to this hospital; and the case occurred in this very house. A plate, which I show you, accompanies Mr. Thomson's account, from which it appears that the bones were contorted in almost all possible directions; they had so completely lost their firmness, that when the man died, even the femur, the bones of the skull and pelvis, could be cut through by a common scalpel. The patient was admitted into the hospital for what was considered rheumatism; and he very soon became unable to move from his bed, partly because his bones would not bear him up, and partly on account of the pain, which was very severe. He was bed-ridden for a length of time before his death.

Symptoms.—The symptoms of the disease are of this kind: we shall probably have, in the first instance, considerable pain—pain in the joints—pain in the bones—which might simulate and be mistaken for rheumatic pains. We shall soon find that the patient is unable to move, and will lie on a couch or on a bed. We shall in process of time be able to detect easily the softening of the bones; and if they become at all contorted, we can then have no hesitation in declaring the complaint under which the patient labours.

Treatment.—How then shall we cure this disease? I am almost afraid that when it is of long standing, expecting a cure would be hopeless; indeed, I believe that in every instance where a loss of their solidity has taken place, to such an extent that the bones could be bent by the hand, the case has terminated fatally; but all cases of mollities ossium do not assume such a formidable appearance; and it would be right to attempt to produce a healthy action in the body generally, by purgatives, alteratives, and tonics—to strengthen the fibres of the muscles—to brace the system, by cold bathing and proper diet. In this, then, appears to consist the principal part of our practice—correcting the secretions, strengthening the constitution by proper medicines and diet, perhaps the exhibition of lime, and keeping the patient in a recumbent posture, so that, if recovery take place, there should be as little deformity as possible.

It has been remarked, that those cases which I have called, after Dr. Blundell, the elliptical contortions of the pelvis, are generally produced by mollities ossium, while the angular are caused by rickets. How true this may be I cannot determine. In rickets certainly the child is walking about, because there is no great deal of pain; and when the bones give, the acetabula are thrown inwards, towards the promontory of the sacrum, and the symphysis pubis is thrust outwards; and in this way this peculiar configuration may be produced. But under mollities ossium the patient is unable to move, in consequence of the pain which is experienced; she lies on her back, and the weight of the symphysis pubis, pressing inwards, is sufficient to produce the deformity of the bones; but, as I said before, I cannot answer that this opinion is correct.

We must leave the diseases of the Joints of the Pelvis to the next lecture, and shall afterwards proceed to the anatomy of the organs of generation.

CLINICAL OBSERVATIONS ON DIFFUSE PHLEGMON.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

Case I.*—*Lesion of the Head from a Fall—Diffuse Erysipelatous Phlegmon of the Integuments—Death—Autopsy.*

Phlegmonous erysipelas of the integuments of the head, said M. Dupuytren, is

* This first case, which is of late occurrence, we take from the Gazette des Hôpitaux.

one of the most important accidents with which we can be acquainted, both on account of its frequency, its severity, and the active treatment which is required to guard against its terminating fatally. We have had within the last few days a patient in the Salle Ste. Marthe, whose case was a fatal one of this kind of phlegmon.

Jacques Millaingrand, aged 53, of a moderately good constitution, but worn down with labour, came into the Hôtel Dieu on the 18th of last month (Sept. 1833.) He was a day-labourer, working hard, and living ill. A few days before he was taken into the hospital he was engaged in loading stones, when in dismounting from the waggon in which he had been, he fell, and the whole weight of his body came chiefly on the crown of his head. For the first four days he felt nothing particular resulting from the accident; but he fell sick on the fifth day, complaining of headache, troubled sleep, and severe pain. He desired to be carried to the Hôtel Dieu.

On his arrival, the characters of the phlegmon were the following:—The skin, attacked with œdematous inflammation, was blanched, pitted under the fingers, and resumed its level but slowly. Merely touching the hair gave the patient much torture. He was suffering at the same time from fever, accompanied with delirium: he said he was quite well, and wanted to go away. Coma presently supervened, and shiverings indicated the formation of pus, which though at first diffused pretty generally through the cellular tissue, formed at last a large reservoir on the top of the head, and then several abscesses, first on the right temple, then on the upper margin of the left orbital arcade, &c.

The symptoms had now become intense: the surgeon opened the parts by free incision, and a large quantity of not unhealthy-looking pus flowed from the reservoir. By means of frequent dressings the flow of pus was encouraged, and it was thus prevented from clogging the wounds. An emetic, purgatives, and slightly-irritating lavements, were administered.

As the erysipelas was extending to the face, vesicatories were applied to it—a mode of treatment which produced a beneficial change in the state of the patient. Next day he wanted food; and desired to be allowed to go home. M. Dupuytren was not wrong in his surmise, that the change for the better would not prove very permanent. In fact, on the following day all the symptoms were aggravated: drowsiness, delirium,—the man got up in the night, and wandered for some seconds about the beds of his neighbours: he was deaf at the next day's visit, could give no answer to any question, and was labouring under general depression. Pulse frequent, full, resisting: the heat, which was not considerable in other parts of the body, was still pretty high in the face: the teeth and lips dry. On the following day, profound coma, constant delirium, lips parched and blackish; tongue dry and horny. Death on the 27th, ten days after he came in.

The chief result of the autopsy was the discovery of a well-marked infiltration of the meninges and lobes of the brain; a considerable effusion of serum on the surface of this viscus and in the occipital fossæ.

It may be added, that there is another man in the very same ward who has been more fortunate in the issue of a complaint of the same sort. But he has had the whole vault of the cranium necrosed. There remains, however, at present, nothing more than a fistulous opening on the forehead: the man's general health is very satisfactory, his appetite is good, and all his functions are performed in the most promising manner.

I have frequently spoken in my clinical lectures, said M. Dupuytren, of a species of phlegmon to which I have given the name of *diffuse phlegmon**—a designation which has since been generally adopted here. This disease, though very frequent and severe, has been passed over in silence by most authors, while it has been confounded by others with its complications, and described under the names of phlegmonous erysipelas—erysipelatous phlegmon—traumatic erysipelas, &c. Many have mistaken it for phlebitis, inflammation of the lymphatics, &c.

The expression *diffuse* phlegmon has been adopted to distinguish this disease from that in which the phlegmon is *circumscribed*, and the following example will sufficiently illustrate the characters of the disease.

Case II.—*Diffuse Phlegmon of the Left Leg.*

A washerwoman, aged 68, rather fat, met with a fall by which she bruised her leg rather severely, but without producing any wound. The pain at first was slight, and accompanied by very circumscribed redness: these symptoms, however, went on increasing; the limb became swollen; fever supervened; and she was brought to the hospital, but not for twenty days after the accident. At this time the limb was the seat of very active inflammation, and the epidermis detached at various points. At the inner part, between the middle and lower third of the limb, there was a black-

* A notice of one of those lectures will be found in our first volume.

ish rounded eschar, about two inches in extent. Round it, and at other points in the same situation, manifest fluctuation was present. The eschar was divided, and we then arrived at the depôt from which issued a considerable quantity of very fœtid, sanious pus. A counter opening was made higher up, and this also gave exit to fluid of the same character. When the soft parts were pressed, it did not appear that any communication existed between these two collections. The limb was then dressed and placed on pillows. A small bleeding was practised, and injections administered, in consequence of the bowels having been confined for some days. On the fourth day the eschar became detached, and left a large opening, which gave vent to an immense quantity of fœtid pus. On the fifth the disease had made further progress, and soon extended over the greater part of the limb, notwithstanding the repeated application of leeches.

In other situations, continued M. Dupuytren, diffuse erysipelatous phlegmon frequently terminates in resolution, but in the lower extremities suppuration always takes place. The cellular tissue of these parts passes as rapidly into suppuration as that about the eyelids. This termination is very unfavourable in diffuse phlegmon, and brings with it the destruction of the cellular membrane. In fact, the pus is poured out, not into one cell—not into a general cavity, but into each little individual cell, forming a numberless collection of distinct depôts. Thus, where suppuration takes place, the cellular membrane is destroyed in large pieces:—I have frequently removed portions half a foot long. The skin now becomes attenuated, and being deprived of nourishment, perishes from this cause, and not from inflammation. This consecutive gangrene of the skin is very common in the lower extremities, particularly the leg, where the arteries of nutrition (the anterior and posterior tibial and the peroneal) are deep-seated, and do not communicate with the skin, except by very minute anastomoses, and which are destroyed by the death of subjacent cellular membrane. This gangrene, however, is extremely rare on the head, where, nevertheless, this kind of phlegmon is frequent. The distribution of the arteries, however, is very different: situated between the skin and the occipito-frontalis aponeurosis, they are so united with the skin that it is difficult to separate them even in dissections.

If a phlegmon comes on in this situation, its seat is always between the pericranium and aponeurosis: if suppuration occurs speedily, and is limited to the cellular membrane, without implicating the pericranium, the disease is not mortal; but, on the contrary, it usually is so, if this part be destroyed or denuded. But the skin escapes destruction, because the arteries continue to supply it with sufficient nourishment: even if the whole of the cellular membrane of the cranium were to perish, it would not cut off the arterial supply to the skin. I have never seen but one case where the skin itself perished, and this occurred about two years ago.

The causes of diffuse phlegmon are numerous. It frequently results from bleeding, even when properly performed: so, also, the ligature of a vein may produce it; and in this, as in the preceding case, the vein itself may or may not be inflamed. The inflammation, in these instances, may occupy the whole thickness of the limb, or only the course of the vessel, and then it is only *diffuse* in a longitudinal sense. Diffuse phlegmon is the most frequent disease produced by morbid poisons applied to the skin or cellular membrane, as in the opening of bodies.

Excessive fatigue during forced marches is also one of the most frequent causes of diffuse phlegmon, which then presents such intensity, and is accompanied by symptoms so severe, as almost invariably to prove fatal. This malignity is owing to two causes—one local, the other general; namely, the fatigue of the lower limb, and the exhaustion of nervous energy, by the prolonged action of the muscles.

Persons who have suffered from comminuted fracture, particularly if produced by fire-arms, are very liable to a consecutive inflammation situated in parts adjoining the fractured bone, and this often assumes the character of diffuse phlegmon. It is also frequently seen after capital operations, and as a complication of various injuries, especially burns. It has also been known to follow the application of the linimentum ammoniæ to leech bites. Numerous observations also shew that it may arise from very slight punctures and wounds without any poisonous inoculation, or from a considerable muscular exertion, or even from the friction of rough clothing. Lastly, diffuse phlegmon is sometimes developed spontaneously; at least without any assignable cause.

I shall illustrate these statements by some examples.

Case III.—*Extensive diffuse Phlegmon of the left upper extremity from a bite on the little finger.*

—— Boyer, aged 27, a mason, provoked one of his companions, who bit him in the left little finger. The pain was very acute, and the part bled freely. The pain continued, and next day it was followed by tumefaction, speedily extending to the hand and fore-arm.

Ten days after, the time at which he was brought to the Hôtel Dieu, the left arm was more than double its natural size; the skin was hot, very tense, and painful; the little finger exhibited a small transverse wound at its anterior surface, which implicated the skin, cellular membrane, tendinous aponeurosis, and from which issued a small quantity of whitish pus. Obscure fluctuation was perceived in the palm of the hand. A longitudinal incision was made there, from which a considerable quantity of pus flowed. The limb was placed in a half bent position on a pillow, and covered with emollient cataplasms. Besides these local symptoms, there was violent fever, with rapid pulse, hurried breathing, hot skin, &c. A large bleeding was practised, and soothing drinks and rigorous diet enjoined. The twelfth day from the accident, (the second of his admission into the hospital,) the patient was much better. An opening of considerable size was made on the cubital edge of the hand; and the upper part of the fore-arm being still tense and painful, thirty leeches were applied, followed by fomentations and cataplasms.

On the 15th day there was very marked fluctuation near the head of the radius: a free incision was made in that situation, in which musk was placed after the exit of the pus. The fever had disappeared. On the 29th day another opening had to be made at the front of the forearm, after which the health was speedily re-established.

Case IV.—*Diffuse Phlegmon of right arm from a thorn in the middle finger—Spontaneous Phlegmon of the lower extremity—Death.*

—— Renout, a female, aged 47, presenting the appearance of premature decrepitude, accidentally introduced a thorn into the middle finger. She could not give any precise account of the symptoms which followed, but it appeared by her account that the finger swelled, and that this soon extended to the hand, forearm, and arm; and that she was seized with gastro-intestinal disturbance. At the time of her admission into the hospital, three weeks after the accident, the hand and all the upper extremity were about three times their natural size. The pulse was rapid; the skin hot and dry; the tongue parched; the conjunctivæ red; the abdomen tender. The house-surgeon immediately bled her in the arm, and had the limb covered with cataplasms. Next day, forty leeches were applied to the limb, particularly about the hand. The cataplasms, fomentations, and semiflexed position, were continued, and produced great relief.

On the fifth day, however, the patient complained for the first time of pain in the knee. On examining it, considerable swelling was perceived, with fluctuation, without any discolouration of the skin. Twenty leeches, fomentations, and semiflexed position of the limb, were ordered.

On the seventh day, several purulent depôts were opened in the hand and along the inferior edge of the wrist: the bones were denuded. The state of the patient now excited great apprehension. The tumefaction had much diminished in the upper extremity, but that of the lower limb had augmented, and extended itself to the thigh. The gastric disturbance became intense, cerebral symptoms supervened, and the patient sunk the ninth day after her arrival in the hospital, notwithstanding the most anxious and active attention shewn to her case.

The facts just related, continued M. Dupuytren, give you some idea of the character of diffuse phlegmon; but we must enter more into particulars. The début of diffuse phlegmon, and especially of that which is spontaneous, is announced by a rigor of greater or less severity: this is followed by heat and fever. This fever becomes continued, only it has paroxysms and remissions two or three times a day, and these have often led to such erroneous views as to occasion their being treated by means of cinchona, on the idea of their being attacks of ague. It is not unimportant to keep in mind the distinction between symptomatic and intermittent fever. A slight degree of pain of the skin frequently comes on 24 or 36 hours before the shivering. More than once, where this pain has been the only symptom, I have been able to predict the disease. The skin then becomes red, the tint being that of the rose. This colour is not uniform; and one might as readily anticipate an attack of simple erysipelas as of erysipelatous phlegmon, if a little œdema did not show itself in the subjacent cellular tissue, accompanied by perceptible pitting on pressure. What practitioner not familiar with the affection, could, from such appearances, foretel the approach of so terrible a disease?

The symptoms increase — the fever runs higher—the finger applied, pressed strongly upon the skin, no longer receives any depression, but encounters a marked resistance—the cellular membrane becomes hard—the colour passes into a violet, and phlyctenæ make their appearance — the bowels are sluggish—the urine is diminished or suppressed—the patient is deprived of sleep, and his agitation is extreme.

For two, three, or four days, the disease seems now to be stationary. If at this

time an incision be made into the part, a milky serum escapes: it is abundant, and with but little pus. A few days later the serosity is scanty, while the pus is plentiful: yet a few days more, and there exudes a discharge as white as milk, and almost as consistent as lard. The cellular membrane is now struck with suppuration *(frappé de suppuration,)* and this is equivalent to saying that it is struck with death. Experience alone teaches one to distrust this deceitful stage: it has often enabled me to declare the existence of suppuration, contrary to the opinion of practitioners less accustomed to the disease.

At length, in a day or two more, the skin bursts, the phlyctenæ pierce the integument, and violet-coloured serum exudes. White or black sloughs are perceived beneath, which rapidly extend; the surgeon, then, only becomes aware of these ravages, when they have already run their course. When these portions of cellular membrane are removed, the skin is seen to be detached and undermined, so that it can be raised by blowing under it. Here and there little projections are seen — the only bond of union which remains, and these are composed of vessels and nerves which have resisted the destructive process. Great care must be taken to preserve them unimpaired.

The local ravages are now arrived at their term (when the skin has perished, as well as the parts beneath it), but not so the danger of the patient. You may be satisfied of this from the example of a man in the hospital, who had fallen upon his knee. An erysipelatous phlegmon supervened, and extended rapidly over the leg and thigh, notwithstanding the most active means. The aponeurosis of the thigh was exposed; the tibia and patella were bare to the periosteum; the entire limb was deprived of its cellular membrane and skin. What could the efforts of nature avail against such extensive mischief? Art was equally powerless. A suppuration of enormous extent, amounting sometimes to a pound and a half, or even two pounds, in the day, rapidly exhausted the strength; and this young man, though of the best possible constitution, unavoidably sunk under it. If, indeed, the suppuration were the only bad symptom, something might perhaps have been hoped for from the combined efforts of nature and art; but copious perspirations, and purging to the extent of from ten to twenty stools daily, were conjoined with the preceding. In vain were these also combatted, for yet another set of symptoms came on; almost always, indeed, towards the latter stage, does suppuration in the pleura, lungs, or liver, fill up the melancholy picture. More than one-half of such patients sink at last from internal inflammations, especially of the liver or lungs. Such is the history of this affection, which proves more fatal than any other of the phlegmasiæ.

Let us consider the chief points attending it. I have particularly alluded to the fever coming on in paroxysms, which appear two or three times a day; it is often mistaken for intermittent, but it is nevertheless a continued fever, and often accompanied by adynamic symptoms, which necessarily produce a change in our treatment. I have long insisted on this period of a deceitful arrest of the symptoms, about the fifth or sixth day, which keeps even the most experienced practitioners in doubt; and so far misleads the inexperienced, as to induce them to think resolution at hand, when suppuration is already declared. I have also dwelt upon the fact, that while in circumscribed phlegmon the pus is contained in one or two cells, here it fills each particular *cellule* of the tissue, and, after the manner in which when the muscular structures become involved in the disease, strangulation takes place, which is speedily followed by gangrene, unless relieved by free incisions. These attacks, less dangerous in children, are always alarming in adults—almost constantly fatal in elderly persons; while, if the patient escapes, the convalescence is of the most lingering kind, the cicatrization very difficult to effect, and the cicatrix always very ready to give way again. But one of the most important points to be attended to, is the state of the digestive organs which precedes, accompanies, or follows, the breaking out of this disease. Already, before it became the doctrine of our schools, had I pointed out the changes which are found in the alimentary canal after death; I shall therefore pass on to what is most important in reference to the treatment.

Treatment.—This form of inflammation may depend upon a cause which is either external or internal; most commonly it is the former, but complicated with internal symptoms. If a contused or lacerated wound be made in a person otherwise healthy, and who has no affection of the *primæ viæ*, it is very uncommon to see diffused phlegmon produced, or, at all events, it is easily combated; but, on the contrary, if gastric symptoms precede or follow the accident, symptoms of this kind of phlegmon come on too often without our being able to repress them. If a wound without internal complication give rise to it, though it be contused or lacerated, it must have been irritated by exposure, by violence, or by the friction of the clothes—in short, it must have been *envenomed* in some way or other. In the treatment, then, every thing calculated to cause irritation is to be sedulously

avoided. If the wound appears to be becoming inflamed—if there be any engorgement of its edges—any tumefaction about it, leeches must be applied; and if the patient be robust, one or two general bleedings are required. It is often useful to precede the application of leeches by general bleeding; if the order be reversed, the leeches, in place of unloading the part, frequently cause an increased flow of blood to it, and thus augment the evil.

Bleeding, general and local, in diffuse phlegmon, ought to be accompanied by general, or at all events by local bathing. These must be of an emollient kind, such as poultices; or still better, cold, demulcent, and sedative applications to the part. If the cellular inflammation has commenced, the baths, leeches, cataplasms, sedatives, &c. must be again had recourse to; and this antiphlogistic treatment is that which is best adapted to the first stage, or onset of the disease. But if the part be tense—if the inflammation appears dependent upon strangulation of the parts, simple or crucial incisions must be practised without delay; and local inflammation is often thus arrested, and its spreading prevented. Rigorous diet and diluents are also indicated. There is, however, a third expedient which I have been in the habit of using—namely, a large blister to the wound and skin adjoining it. The irritation which it produces, and the suppuration, sometimes prevent the development of the diffuse phlegmon.

But if, before or after its appearance, there be gastric disturbance—if the tongue, without being red at the point and edges, is covered at the base with a yellowish coating—if there be loss of appetite, nausea, with little or no tenderness at the epigastrium, one, or even two emetics, may be advantageous; and gentle purgatives, if the intestinal canal is itself affected,—by which the course of the phlegmon is either suspended, or rendered less troublesome. It is a truth, said M. Dupuytren, of which you may be well assured, that emetics and purgatives, formerly too much employed, are now fallen into too great neglect*.

If the phlegmon be fully developed—if, after a contused or lacerated wound, swelling of the parts comes on—if the cellular membrane adjoining be already œdematous, one or two small bleedings may still be of service: I say *small*, for by large abstractions of blood we run the risk of reducing the patient to an unpleasant state of depression. The remedies above-mentioned are to be assiduously put in force; the parts to be freed by incisions, and maintained in an elevated—very elevated—position, to obviate the congestion as much as possible; and the cold sedatives are to be systematically used. As to the cataplasms, so much used at other hospitals, I regard them as often injurious, by keeping up the local discharge. If the symptoms continue, or increase, I cannot venture to recommend blisters, having seen results so different from them, that I fear to apply them. Sometimes they produce a speedy resolution; but at others, though rarely it is true, they have evidently been the cause of sloughing. I am indeed the more anxious to insist on this point, because in various theses and other works, the success I have obtained has been much exaggerated. It is not in phlegmon alone, but in almost all cases of erysipelas, that I recommend these remedies, and, in fact, use them with great advantage. But if they be sometimes hurtful in diffuse phlegmon, still more frequently they exert no influence of any kind over it. About the fourth or fifth day the cellular tissue is almost always *struck* with suppuration. Ought, then, the pus to be left in these little cells, or ought we to hasten to set it free by incisions? Such incisions sometimes diminish the inflammation and suppuration which follows it; but, on the other hand, they also often increase them. It is necessary, then, at this stage also of the malady, to insist upon the application of leeches and refrigerants. But if the suppuration be definitively established, hesitate no longer; cut freely into those parts whose dependent situation renders them liable to become receivers of the pus; renew the dressings frequently, and take care each time that you do so, to remove all the pus with your sponges.

If, notwithstanding all your efforts, the skin perishes for want of nourishment, it is then above all that we must endeavour to support the strength of our patient, for it is then especially that adynamic symptoms are most apt to appear. If you cannot prevent them, meet the first symptoms with unirritating tonics, and those which follow with gentle antispasmodics. Spirituous preparations, and even wines, are hurtful; substitute for them an aqueous infusion of cinchona, and apply the bark itself externally to the parts*. It is at this time that the state of the cellular membrane comes on, which is designated by the expression, "struck with suppuration" (*frappé de suppuration.*) Sometimes enor-

* This remark holds good in England also, with respect to emetics; but not, we think, with respect to purgatives.—TRANSLATOR.

* We remember to have seen wounds in the state here described, in French soldiers wounded at Waterloo, dressed with poultices made of powdered bark and water. Although tried extensively, no very conspicuous benefit resulted.—TRANSLATOR.

mous portions of the skin are detached; assist their removal, but carefully avoid any forcible pulling, and spare the attachments which remain between the skin and the subjacent parts. These bands consist, as has been said, of vessels and nerves; and their laceration gives pain, or even causes hæmorrhage, neither of which the patient can bear without injury. A new treatment now commences; it is here that the art of *dressing* becomes of importance. Wherever the pus collects, it must be freed by incisions, and evacuated by gentle compression, while the vitality of the skin must be stimulated by the application of cinchona, or spirituous lotions. By the combined efforts of nature and art, the skin in successful cases is seen to become, as it were, glued to the subjacent parts again, and we may then know that the danger is on the decline; and every thing is to be done to facilitate the cicatrization of the denuded parts. Sometimes the inflammation runs too high for this process, and then leeches and low diet must be again had recourse to. The exuberant granulations are to be kept down with nitrate of silver; and a solution of this is often very serviceable at this time, the strength being four, five, or six grains to the ounce.

The following is the plan of dressing which ought to be adopted:—The edges, and a very small portion of the surface of the wound, are to be covered with little slips of bandage spread with cerate. In this way the laceration of the incipient portions of cicatrix is prevented when the dressings are again removed. The rest of the surface of the wound must be covered with compresses of fine soft linen, spread with cerate, and pierced with a number of holes, in the manner I have been long accustomed to adopt with respect to burns. The holes allow the matter to escape, which is thus prevented from remaining in contact with the wound; besides which, the great advantage is obtained of being able to remove all the dressings in one mass, and with the greatest ease.

During the whole period of treatment, the greatest attention is required to the diet of the patient, and to prevent him from the least exposure to cold or damp. I have opened a number of the bodies (said M. Dupuytren) of those who have sunk under this disease, and I have observed, that of those who died towards the end of this affection the phlegmon has seemed less the cause of death than some internal inflammation resulting from some imprudence. Pleurisy, pneumonia, and hepatic abscess, were the most common, and these followed exposure of the face, chest, or limbs, to cold. If the phlegmon be situated on the lower extremities, the patient must not be allowed to get up and walk: these movements give rise to determinations of blood, and this may prove the immediate cause of a return of the phlegmon, or erysipelas, scarcely less troublesome. Even when the cicatrix is completely formed, the degree of motion permitted ought to be very limited. Large cicatrices are apt to be lacerated, and this occurs in a singular manner: a little phlyctena filled with pus opens at one point, and leaves a greyish ulcer, like what we see in syphilis; the ulceration extends rapidly, and makes such progress that in twenty-four hours, more or less, the cicatrix is entirely destroyed. It is true that it is renewed with much less difficulty than before, and this accident is not always disadvantageous to the patient, for the primary cicatrix is usually very weak, and easily torn; but this weakness and proneness to laceration diminish every time it is reproduced, and sometimes it only acquires sufficient solidity after undergoing this process three or four times. It is then only that the patient can be regarded as completely out of danger.

ON DENTITION;

WITH AN

ATTEMPT TO EXHIBIT THE OCCASIONAL PRESENCE OF CERTAIN DISEASED CONDITIONS OF THE BODY,

As connected with its Irregular States.

By Dr. Ashburner.

[Continued from page 113.]

What is the period of life at which the first teeth are cut?

To establish this epoch so surely and correctly as that any deviation from it would be anormal, would be a very difficult matter. The works of anatomists and other writers may be consulted, and the time which they state will be found to vary. From the sixth to the eighth month of life is the vague definition given of the normal period of the first eruption of the teeth through the gums. (See Baumés, Prem. Dentit. p. 21.) Rarely earlier, often later it may happen. We have no means, as society is at present constituted, of arriving nearer to the truth. The modifying circumstances that surround us in every direction, tend so powerfully to irregulate the periods of organic development, that a variation is found to take place in the course of even those events which

appear to be most completely under the influence of fixed laws. The period of gestation has been found to offer anormalities. The standard period has certainly not been minutely established, enough having been discovered to make us aware that varieties are often presented to our notice quite incompatible with the idea that the law has no exceptions. The development of the teeth offers, in respect to its periods, considerable irregularities, and the aberrations from the normal period are perhaps at no epoch more frequent than at that of the first cutting of the first set. The trains of growth have gone on so rapidly in respect to a few of the first teeth, that examples of children being born with two, three, or four, teeth cut, are not uncommon. Haller quotes nineteen cases of precocious appearance of the first teeth, and instances in other authors are not rare. (See Baumes, p. 20.) Few practitioners of extensive experience can be without some such cases.

No events exhibit the influence of modifying circumstances in the early history of development more strikingly than the accelerated growths of particular organs, and the disordered conditions of others, produced upon the infant by the habit of the nurse's system. I once saw a case of precocious appearance of two incisor teeth of the lower jaw, in a female child of three months old, which was nursed on the breast of a fine stout Irish woman, who had herself had two children cutting teeth at the same age, both of which had died from the rapid progress of dentition. The suckling was a delicate infant, and had a bowel complaint, which induced the parents to change the wet-nurse; and the child throve, and had no other teeth for five months afterwards.

In other cases the development is very tardy. I have seen a child twenty-two months old beginning to cut its first tooth, which was an incisor, in the upper jaw: it was a very delicate, though lively infant, with large head, tumid abdomen, and peculiarly small-sized extremities. Van Swieten relates a case of a very healthy female infant, which did not cut a tooth till it was nineteen months old. Serres quotes cases of persons cutting their first teeth, from Raymond, Fauchard, Brouset, &c. who had passed through several years of life. (Essai, &c. p. 75; also Baumés, p. 22.)

"Parmi les observations de Lanzoni," says Serres, "on en trouve une forte interessante, dont le sujet fut le fils d'un apothicaire. Ses premiers dents ne pousserent qu'à l'age de sept ans, et il ne commença à parler qu'à cette epoque."

I had, long before the Essay of Serres fell into my hands, observed so many cases of tardy access of speech, and of stammering, connected with erroneous development of the teeth, that I had noted the concomitance, for the future treatment of the fault.

The teeth of the first dentition commonly cut in couples; a short interval of time occurring between the appearance of each tooth, connected perhaps with the preponderant energy that obtains on one side of the body. The two anterior incisors of the lower jaw should appear first; then, after a shorter or longer period, perhaps from fifteen to twenty days, the two anterior incisors of the upper jaw come through: to these succeed the lateral couple of incisors in the lower jaw; then come those of the upper jaw. After these, the two molar teeth nearest to the lateral incisors of the lower jaw appear; then the first molars of the upper jaw. After which come the lower two canines; then the upper canine; then the two second molar of the lower jaw, and afterwards the corresponding molars of the upper jaw.

As far as my experience leads me to conclude, the great majority of children who cut teeth with any regularity proceed in their dentition in the train I have indicated, and the period occupied in the process is about two years from the appearance of the first tooth. Baumés, in his Treatise on the First Dentition (p. 21), says that it is not commonly completed till the thirtieth month of the child's age. He adds, "Chez un assez grand nombre, la dentition est terminée à deux ans revolus."

The teeth cut through the gums, for the most part, in the same order in which they ossify. It is curious to observe how vague has been the knowledge of the best anatomists on this subject. They have copied from one another without much reflection, and have, for the most part, related the precedence of appearance of the canine teeth to the first molares. Baumés and Rosen (see Rosen on Diseases of Children, translated by Sparman, art. on Dentition), men of experience, continue the error.

De la Barre is the first author, in whose excellent Thesis, (Paris, 1806, p. 12,) as far as I know, appears the correct train. Serres takes credit to himself for having first indicated it, and, in a nettled spirit, De la Barre finds fault with Serres for having stated "une chose que l'experience dement positivement." (See De la Barre, Seconde Dentition, p. 33.)

The approximation to a normal order of eruption of the first dentition, may be thus attempted :—

Periods.	Teeth.
Seventh month after birth	Two central lower incisors.
Eighth month . .	Two central upper incisors.
Ninth month . . .	Two lateral lower incisors.
About ninth or tenth month . .	Two lateral upper incisors.
About twelfth to 14th month . .	Four first molar teeth.
16th, 17th, 18th, 19th, to 20th month	Two lower canine teeth. Two upper canine teeth.
23d to 30th month	Four last molar teeth.

There is no circumstance relating to growth more striking, or more curious, than the division of life into epochs. The climacteric years of the ancients were multiples of seven; and they were pretty accurate observers of the changes which took place in the body at different periods. That there must be a rule regulating the grand epochs of development in a *perfectly healthy* individual, there can be no doubt. In the course of life, man appears, in the changes to which his frame is subjected, to go through several types of configuration: the same individual that had once, in the womb of his parent, the shape of a worm, and that subsequently rapidly traversed the types of other gradations of the lower animals, and became an infant breathing the surrounding air, is by no means to be recognized as *identical* with the vigorous man of thirty-five. His physiognomy alone points out the changes effected upon him, and we cannot doubt that there must be some ground for the vulgar observation that has come down to us, of the body undergoing remarkable changes during the course of successive climacteries. His progress through his varied types of configuration is dependent on the completion of each stage of his course. The measurement of time by chronometer—the indications of a completion of each advance of period—are illustrative of the trains through various successive types in the course of the development of a perfectly healthy person. The circumstances relating to dentition are but an isolated set of phenomena. All the organs of the body should have their chronicles; but it will be found that they are the wheels and springs of the time-piece. The chief *index* is remarked in the organs of mastication, and they respond to epochs.

When the first dentition is complete, nature appears to rest. The teeth, in number and in size, being sufficient for the wants of the child, there seems for a time to be no further effort of growth among them. The principle of a continual progress is, however, established in the system. Though there is an apparent rest, there is, in fact, a real march in all parts of the body. The clock does not incessantly strike, but the hands are moving. The law which regulates the trains of growth throughout the body, insists upon an additional energy being communicated at certain periods to organs whose epochs of advancement to a type of more exalted perfection had arrived. It is not to be supposed that because the first set of teeth have all appeared, there is no change in progress in the jaws, or in the germs of the second set of teeth. The jaws are gradually expanding, and as they are becoming larger, the capsules of the teeth of the second dentition are preparing the organs they have to build for assuming their stations.

Let us consider the changes undergone by the jaws and by the teeth of the first dentition. When the progress of growth has extended so far as to render the first set of twenty teeth insufficient for the purposes of complete mastication, they appear to become loose in their sockets: in reality, an absorptive process is established, and their roots are eaten away. The pulp having first decayed, the crown crumbles away from the gums. Normally, this change takes place in the teeth exactly in the order in which they were originally formed, and in which they cut through the gums. The central incisors of the lower jaw fall

away first; then those of the upper jaw, between which the growth of the bone has created a very remarkable space; then go the interior lateral incisors; and so on. Before, however, any of the teeth of the first set fall out, the jaw has already acquired a considerable growth, and four molar teeth have appeared at the back of the existing twenty teeth. These four are permanent teeth: they occupy a large space, and their relations to the first set and to the teeth which are afterwards to appear, will be more advantageously explained after some further anatomical inquiries; and these must relate to the organs concerned in supplying the first and second set of teeth with nourishment, and the history of the changes they undergo, in order that the deciduous teeth, and the processes of bone which belong to them, may vanish, and allow the permanent set to grow up and take a normal alignement.

How are the teeth in the infant nourished? Are there any remarkable differences in the distribution of the arteries belonging to the first, and of those belonging to the second set of teeth?

Serres, whose ingenuity and whose anatomical labours have acquired for him some reputation, asserts, that the usual description of the arterial distribution in these parts is incorrect, (Essai, p. 16); while De la Barre is at some pains to show that Serres is in error, and has based his theory of dentition on a very small number of facts, (Seconde Dentition, p. 65.)

The arteries that are given to the teeth come no doubt from the branches supplied by the internal maxillary artery; but the question is, whether the dental artery of the lower jaw has, up to the period of the shedding of the first teeth, two branches, running in two separate bony channels. In the Descriptive Anatomy of Bichat, (tom. iv. pp. 157-8,) where the best account of the dental artery is given, there is not a word said of the branch supplying exclusively the germs and teeth of the first dentition. Considering the jaw of the adult alone, the course of the artery is stated with sufficient accuracy. The disposition described has been established in the course of the second dentition; but Serres would contend, that up to the period when a change takes place by the falling out of the first set and the development of the second set of teeth, the jaw is so much crowded by capsules, that there would be hardly room for the main dental artery to pass to the dental hole, and he asserts that in the fœtus and in the child up to six or seven years, there are two canals and two dental arteries.

The inferior artery, occupying the inferior canal, he says, is large in the fœtus, but its area increases up to the third or fourth year of the child's life; then it becomes smaller gradually, and about the eighth or ninth year it is entirely obliterated. Sometimes, however, it lasts longer, and it has been found in a woman thirty-six years of age. In the child and in the fœtus, the dental artery is said by Serres to divide into two branches, between the condyle and coronoid process: one of these passes along the superior dental canal, and the other proceeds along the inferior. The superior artery up to three or four years does not require to be large in its area, its duty being to supply principally the germs of the teeth of the second dentition and the alveolar bands. The lower branch dips down into the inferior canal, proceeds in it as far as the first molar of the first dentition, without giving off any important branch: it gives a branch to this tooth, then it sends branches to the incisors and canines of the first dentition. Afterwards, it forms a full vascular network around the symphysis, and then proceeds through a hole under the canine tooth, where it anastomoses with the superior dental artery.—(Serres, p. 20.)

In the upper jaw, there does not seem to be occasion for two arterial branches. The germs have more space, and the dental branches of the superior maxillary artery are distributed to the two sets of teeth in free pencils, unshackled in their course from above to the germs by a want of due space.

When flat denials are made to the statements of anatomists of such reputation as Serres, it must be confessed that the subject is not at rest. The developmental anatomy of the jaws requires further investigation. The veins of the teeth follow the course of the arteries, and at last unite, becoming the internal maxillary vein. The bloodvessels supplying the teeth are by no means of a proportionate small size; on the contrary, considering the organs they have to nourish, the quantity of blood they convey is large.

The same observation as to volume is

applicable when the size of each nervous twig going to a tooth is considered, and it will be found that the sympathies propagated to various parts of the body generated by mischief occurring to the nervous parts of the dental matrices, the teeth, and the jaws, are very numerous. Anatomists have laboured well to make out the structure and distribution of the nerves of these parts. Derived from the fifth pair, they occupied the attention of Rau, who has given the ramifications of the fifth pair with great minuteness. — (Haller, Disput. Anat. tom. iv.) Vieussens followed the maxillary nerves up to the thread which is given to each tooth, and the elder Monro shewed that these threads went to the pulps of the teeth. But the fifth pair of nerves was a subject of intricacy and confusion until the genius of Sir Charles Bell unravelled the skein, and demonstrated the two distinct portions into which the nerve is separable; portions endowed each with a distinct property— the one sensitive, the other motor. The alliance which Sir Charles Bell has indicated between the fifth pair of nerves and the spinal nerves, may tend to dispel much of the intricacy which at present involves the connexion between irritations about the teeth and jaws, and the proneness to disease inflicted by them upon distant parts.

The dental nerves are branches of the superior and inferior maxillary nerves, which travel through their canals in the jaws. These supply the teeth of the second dentition. Serres asserts that the deciduous teeth are supplied with nerves from filaments of the maxillary nerves, which are lodged in channels hollowed out of the jaw-bone; and he has given the name of dental plexus to an interlacing of these filaments at the base of the incisors of the lower jaw. This curious configuration of nervous tendrils is said to waste by degrees, while the deciduous teeth are disappearing. So much blood, such a mass of nerves going to the teeth, do we conclude that these organs are wanting in vital properties? Mr. Bell, in his work on the Teeth, has set this question at rest. It is not only the germs or capsules which require blood for the purpose of carrying on the formation of the ivory and enamel, but that the teeth require a pabulum is very evident. John Hunter opposed this conclusion; and Serres, Geoffroy St. Hilaire, and others, have advocated his views on the inorganic nature of the teeth. Mr. Bell very justly observes, that Mr. Hunter's view can be accounted for only "by the extreme caution which he always observed in deducing general principles from isolated facts, and by the apparent incompatibility of different phenomena which were presented to him, arising from his having neglected, in the present instance, to follow out the reasoning to which they naturally gave rise." (On the Anatomy, Physiology, and Diseases of the Teeth, p. 9.)

It is said that no vessels have been demonstrated by the process of injection. This cannot be allowed to be an argument of great weight against the existence of vessels in a tooth. The colouring matter of injections may be too coarse to permeate the delicate organization of so compact and resisting a substance as ivory. Mr. Bell states that jaundice affects the organic part of a tooth, rendering it yellow; and he had observed in persons who had died by hanging or drowning, the same "part coloured with a dull deep red." Teeth which have been pulled from the mouth and immediately reinstated, have sometimes adhered to the socket, but the colour of them is always different from that of the living teeth in their neighbourhood.

Let a fresh-drawn living tooth be contrasted with one that has been extracted a considerable time, and no doubt will remain as to the characters of each tooth. Indeed, Mr. Bell has, "on purposely breaking a tooth immediately after extraction, where the pain and inflammation have been severe, found *distinct red patches in the very substance of the bone.*" The observation of a case which occurred in the practice of the same scientific dentist, is conclusive upon the existence, not only of blood-vessels, but of absorbents, in the ivory part of teeth. He found a cavity formed in the very substance of a tooth communicating with the natural cavity, and filled with pus,—an example of inflammation, suppuration, and absorption.

The existence of pain may be considered as a sufficient evidence of vitality in an organ. The touching of an exposed portion of the ivory of a tooth with a pointed instrument, usually gives pain to the individual. A fracture of a portion of a tubercle from a good molar

tooth in my own mouth, has exposed some ivory. The application to it of the juice of a fresh currant, of vinegar, or of lemon-juice, causes great pain. There can be no doubt that teeth are organized bodies, and that the vessels and nerves with which they are supplied reach them particularly through the dental hole, but partly through the dental membrane surrounding the root, where it seems to be a medium of nourishment to the ivory. (See Serres, Essai, &c. p. 67.) The teeth and the jaws are under the influence of the laws regulating vitality: but the phenomena attendant upon the progress of each, are liable to deviate from the norma of a perfectly healthy state. The definition of the conditions of the rule of health is by no means easy. An approximation to the truth, in our statements of the events in the progress of growth, is all that can be attempted; and the influences modifying health in civilized communities, as our vanity teaches us to call the present congregations of individuals in society, renders our efforts more difficult as we proceed. The difficulty arises from the want of a standard. Where numbers are influenced by surrounding circumstances to err in the progress of healthy development, it becomes very puzzling to establish a standard of normal growth as to epochs, and sometimes even as to just configuration.

How are we to determine the standard of a proper size and shape of the jaws? and how can the ratio of size of the teeth to the jaws be fixed but by repeated observations on numbers of perfectly healthy individuals? It must be confessed that large cities do not afford the requisite data.

The growth of the jaws has not failed, however, to attract the attention of anatomists. John Hunter, who saw the importance of "a knowledge of the manner in which the two jaws grow," "to the understanding the shedding of the teeth," states that they "seem to differ in their manner of growing from other bones, and also vary according to age." In the fœtus, the jaw bones at various periods "increase in all directions, but more considerably *backwards*." "Till twelve months after birth the jaw still increases in all points, when the bodies of all the six teeth are pretty well formed; but it never after increases in length between the symphysis and the sixth tooth; and from this time, too, the alveolar process, which makes the anterior part of the arches of both jaws, never becomes a section of a larger circle; whence the lower part of a child's face is flatter, or not so projecting forwards, as in the adult."

"After this time, the jaws lengthen only at their posterior ends."

The whole force of growth is, in fact, directed from the posterior part forwards; and the influence of this law is very remarkable in determining the direction, perhaps the size, of the teeth, and in modelling, perhaps, the shape of the face.

As the individual grows, from childhood upwards, we see remarkable alterations taking place in the size and shape of his jaws. At birth the lower jaw has hardly any angle; but at fifty or sixty it is so well marked that its presence is not doubted. After that time, perhaps another change may be perceived. If at eighty the teeth are all gone, the lower jaw has lost its alveolar processes; and in shutting the mouth the chin is thrown up, projecting much beyond the upper jaw, and coming into a line with the articulation. The angle of the jaw disappears, evincing a type of configuration very different from that at the middle term of existence. The same changes, though in a less remarkable degree, are observable in the maxillary tuber of the upper jaw—a part which may be considered as corresponding to the angle of the lower jaw.

If the jaws, then, undergo such remarkable changes in the progress of life, it is not unreasonable to suppose that there may be many circumstances attendant on their growth which must influence the arrangement as well as the configuration, and even the structure, of the teeth, which are organized bodies, supplied with large blood-vessels and nerves, and liable to diseases peculiar to their tissue. On the other hand, the development of the jaws themselves may, in a great measure, be dependent upon the relative progress of the teeth through all the phases of their existence.

De la Barre has remarked (Seconde Dentition, p. 96), that the growth of the jaws is dependent upon the successive development of the teeth; a truth which is but half stated, since normality requires a mutual influence, not sufficiently allowed for in our physiological reflections. The jaws and the teeth re-

quire, for healthy growth, a perfect consent, without which errors may be established in either. Let us inquire into the changes which take place in the structure of the jaws, as connected with the appearance and marshalling of the teeth of the second dentition, to which we may proceed after regarding the differences in the characters of the teeth of both dentitions; these present considerations evincing a difference in the types of configuration in the infant and in the adult, that are very remarkable. The teeth of the first dentition have consisted of twenty; of these, for each jaw, four were incisors, two canine, and four molar: these are sometimes called milk teeth, deciduous teeth, temporary teeth. They differ from their successors in number, in being smaller, partly in the form of some, and in the want of completeness of gradation in type which the presence of a larger number can afford.

The most considerable difference between the teeth of the two dentitions is in the characters of the double teeth. In the first set, the molares have crowns stronger in proportion to the roots, and the crowns are less elevated than in the permanent teeth.

A comparison is sometimes instituted between the deciduous molares and the teeth which are to replace them; and it is said that the teeth of the first dentition are here larger than those of the second. The comparison is not fairly instituted, for the small molar, or bicuspid teeth, have none analogous to them in the first dentition; they constitute the link which was wanting to a perfect gradation of character, from the teeth of simplest configuration to those of more complex structure. In the upper jaw they have more room generally, and the root bifurcates; in the lower jaw the bicuspid more resembles a single tooth. The teeth of the first dentition, which have been replaced by these, had four or five tubercles on their crowns, two fangs in the lower, and three in the upper jaw; so that they differ from bicuspid teeth in several important characters. The second molar of the first dentition is in every respect formed on the decided type of the double teeth, and far from having an analogy to a bicuspid, is, in fact, more bulky than the first permanent molar tooth.

[To be continued.]

FOWLER'S SOLUTION IN A CASE OF WORMS.

To the Editor of the Medical Gazette.

Sir,

In the report of Dr. Elliotson's lectures, in one of your late numbers, are the following expressions. The Doctor is speaking of the Ascaris lumbricoides. "It is far more common in children, and rarer as people grow old; it is usually found in the *small intestines*, occasionally in the large, or in the stomach; I have known a person vomit one."

If you think there is any thing worth notice in the following case, which occurred in my practice, it is much at your service.

A young woman applied to me, complaining of sickness, sinking at the stomach, want of appetite, and rather violent gastrodynia—not constant, but occurring at indefinite periods.

The treatment pursued relieved, but did not remove, those symptoms; when one day she was attacked with a regular and fully-formed paroxysm of intermittent fever, which assumed, to the best of my recollection, a tertian form. Having ascertained that there was no organic mischief about her, I gave her Dr. Fowler's solution of arsenic, in combination with some light bitter infusion. About two days after, she informed me that, immediately after taking a dose of her medicine, she was attacked with a violent pain in the stomach, with a sensation as of something moving; and a few minutes afterwards, becoming sick, she vomited either five or seven large lumbricales (the largest of which must have been, according to her description, six inches long at least), *all dead*. From that time the more obstinate symptoms of the gastric disease gave way—the intermittent affection only remaining. This was shortly cured, and, as far as I know, never returned.

Now two questions appear to me to present themselves here. In the first place, was the death of the worms owing to the action of the mineral solution? and in the second, if it were, might not a similar treatment be used with propriety (nothing in the shape of organic affection forbidding) in any case where the presence of the ascaris L., or even of the tape-worm, was either known or strongly suspected?

The first question, I confess, I am inclined to answer in the affirmative; as I can hardly consider the power of the infusion used to be equal to the production of such results.

As to the second question, I am not so wild as to raise a *theory* on so slight a foundation; but as the means made use of do, in my judgment, appear to have had a very quick and most decided effect in this instance, and as, with proper care, they are easily adapted to all ages, might it not be worth while to give them a trial in a species of disease which is often both troublesome and dangerous, and not easily reached by ordinary means?

I may, perhaps, be telling my medical brethren what they knew before; but in a profession like ours, in which there is so wide a range for theory, I conceive that not only he who communicates a new fact, but even he who sets an old one in a new light, is at least worthy of some attention.

I am, sir,
Yours very obediently,
LEWIS EVANS.

Finsbury-Place, October 24, 1833.

REPLY TO A "FELLOW OF THE COLLEGE OF PHYSICIANS,"

BY A PETITIONING LICENTIATE.

To the Editor of the Medical Gazette.

SIR,

I AM delighted to find that the College of Physicians have at length broken the dignified silence in which they appeared to delight, and that one of their number has stepped forward to defend their corporate monopoly. Permit me to offer a few cursory reflections on the letter of your correspondent, "A Fellow of the College of Physicians."

He begins by observing, "that the petitioning Licentiates are *pleased* to assert, that by the charter of Henry VIII. the perpetuity of the College was to be kept up by the future admission of all men of the same faculty into the College—a statement which has been overruled by the courts of law again and again." To which I reply, that the simple circumstance of its having been so ruled *again and again*, shews that parties were dissatisfied with the first decision of the judges, and that reasonable grounds existed for praying a revision of such decision. The dictum of the judges, in this case, was founded on the consideration of several clauses in the charter, but, while the following words stand part of it, the Licentiates may surely be permitted, without a sneer, to call the attention of Parliament to the predicament in which they are placed:—"Memoratis medicis concessimus, quod ipsi, *omnes*que homines ejusdem facultatis de et in civitate prædicta, sint, in re et nomine, unum corpus et communitas perpetua, sive Collegium *perpetuum*." Until lawyers can rail the words "omnes et perpetuum" out of this bond, judges may decide, but Licentiates will continue to be dissatisfied.

Your correspondent then asks, "What is it that the Licentiates covet? Is it the privilege of paying an annual subscription, or of examining candidates at a very inadequate salary, or the mere name of Fellow?" This question, sir, is very easily answered. The Licentiates covet all that the Fellows strive to withhold from them. Whatever privileges the latter wish to retain, the former desire to participate in. They covet the privilege of examining as well as of being examined, of eligibility to all the honourable offices in the first medical corporation in the kingdom. They are actually so unreasonable as even to covet an opportunity of becoming President of the College of Physicians!! They have that strange obliquity of perception, as to imagine that the elevation of such a man as Sir Gilbert Blane to the President's chair for three or four years, would have added lustre to the College. Honour is to them as dear as it is to the Fellows. Many of them covet not practice for the money that it brings, but for the station in society which it gives. These are the *spolia opima* which the Licentiates are struggling to gain a share of, and for the possession of which they would joyfully contribute their five guineas a year;—and can the Fellows of the College—men of liberal feelings, educated (as your correspondent justly remarks) in the same manner and in the same classes as the highest ranks of society—blame them for their anxiety to erase the mask of inferiority? I will not—

I cannot—believe it. I feel assured, that when once the voice of Parliament and of the nation has decreed that there shall be no distinctions among physicians, except such as arise from their age, experience, and general character in the profession, the Fellows will gladly abolish the obnoxious bye-laws (bygone laws would be a more appropriate term) and receive into their body every physician whose competence to practise has been proved by an adequate examination. The Licentiates, in this respect, ask no indulgence. Let them be examined, if the College think fit, in Galen and Aretæus; but having been examined, and pronounced competent to aspire to the senior physicianship of Bartholomew's, Guy's, and St. George's, let them not be told that they are incompetent for the offices of Censor, Elect, or President.

But here, again, sir, I remember your correspondent, who escapes out of this net by informing us that any Licentiate, thirty-seven years of age, *really entitled to a distinguished rank in the profession*, may, after practising seven years in London, stand a chance of getting into the College, provided he will submit to a *second* examination, conducted before a *large body of men* whose various characters and attainments would render them a kind of check upon one another. Really, sir, I know not how the Licentiates can sufficiently express their gratitude for this boon. It is not enough that they have practised seven years in London with credit—it is not enough that they are "really entitled to a distinguished rank in the profession,"—they must go through the ordeal of an examination before the whole body of Fellows (at the *comitia majora* next after the feast of St. John the Baptist), and afterwards be *balloted for*. This, sir, is the special favour extended to those Licentiates who have distinguished themselves in the eyes of their professional brethren, by their moral conduct and learning (*tam moribus quam doctrina*) during the probationary period of seven years!

It is not to be wondered at that few have availed themselves of this liberal offer. Your correspondent remarks that there can be little doubt that if such a man were to express a *serious* wish to be examined in this fashion, the favour would be granted him. This is certainly an advantage gained, if it be true, as I have always been given to understand, that the only Licentiate who ever asked that favour (the late learned Dr. Wells) was *refused*.

As your correspondent is happily in a communicative mood, perhaps he would have the kindness to give some explanation of the apparent harshness in refusing to the Licentiates the use of the College Library, except under the same restrictions as apply to other members of the profession. I would especially direct his attention to the correspondence which took place, with reference to this question, in 1812, between Dr. Harvey, Dr. Bree, and Dr. Henderson; and respectfully venture to inquire whether the lapse of twenty years has made any alteration in the views of the College on the subject of access to their Library?

When your correspondent has replied, with the candour which I anticipate, to this question, I shall hope for your permission to address him once again, for much yet remains to be said.

—— "Manet alta mente repostum
Judicium Paridis."

I am, sir,
Your very obedient servant,
ONE OF THE FORTY-NINE.

THE LATE *RICE*-IBLE PROCEEDINGS OF THE BOLT-COURT SOCIETY.

To the Editor of the Medical Gazette.

SIR,

IF the shade of Fothergill could have been present at the exhibitions which have been got up at the London Medical Society during the last four evenings of its meetings, it must have blushed to witness such a perversion of those premises which might have been the patrimony of some part of his family. You are probably aware that the Society has had a series of entertainments, by Dr. Tytler, in which he has shewn them that rice has been the principal actor on the various stages of the world, of the great drama of cholera. The Doctor proved that it was not necessary for the London Medical Society to be supplied with *sound* reasoning, fair deductions, and logical conclusions; on the contrary, the grossest assumptions, the most barefaced statements, and the most

disgusting egotism, were sufficient to command its attention for four nights, and to obtain for him *an almost unanimous vote of thanks*. The Doctor first began by stating, that a deteriorated rice grew in the East, in the year previous to the breaking out of the cholera at Jessore; that the eating of this rice produced cholera there; that its exportation into various parts propagated the disease; and that wherever the cholera prevailed, he had found this diseased rice to have been carried. It was in vain to attempt to stem this torrent of absurdity by asking how this diseased rice was delayed reaching our shores until 1832, when the cholera first appeared in England? —how the cholera should appear in the highlands of Scotland, where the inhabitants live on oat cakes, and do not know, and never saw, rice? or how it should appear in the huts of the Irish, who eat potatoes, and cannot buy rice? — how an infant at the breast, who never ate food of any kind, should be attacked with cholera? or how the English could be proved to have eaten this *red rice*, specimens of which the Doctor exhibited to the Society, and which was so different from the rice in common use in this country, that few of our cooks could be persuaded that it was rice, much less to have put it into their puddings? All these difficulties were got over by the following assumptions:—That cholera had prevailed in this country for many years unnoticed, and unknown to medical men; that he had seen an highlander who had lived on rice from his infancy; that a cargo of rice had entered the port of Liverpool, which must have been intended for Ireland; that the mothers of infants at the breast ate rice, and so conveyed it to the bodies of their offspring; that the red rice was bought at 1½d. per pound, submitted to the *expensive* process of bleaching; that it was then ground, mixed with the flour, and made into bread; and this latter was maintained in the face of the fact, that the *very best* wheat flour could be bought at 1¾d. per pound, ready to be made into bread, without requiring the process of bleaching or grinding. Letters and documents were read, proving that at Bilston and other places where cholera prevailed most extensively, rice was scarcely or not at all used as an article of food. "No matter," said Dr. Tytler; "if rice was used at all, it was sufficient to produce cholera;" the quantity had nothing to do with it. One gentleman stated that he had eaten a tablespoonful of this damaged rice, as an experiment, without any ill effects. "Oh," said the Doctor, "it would require a pound to produce cholera;" thus brow-beating the Society by these contrary assertions. A fact was mentioned of a lady who was in the habit of fattening fowls on this damaged rice: "True," said the Doctor; "a diet that might agree with animals might be poison to man:" and this was said in the face of statements which he had previously made, of its producing cholera in goats, and mortification of their genitals, and sloughing of the beaks, and mortification of the heads of fowls. Another fact was stated by a gentleman, that in some establishment where the cholera had prevailed dreadfully, very little rice had been used, and that of the very best quality, attested by the person who purchased it, and the price given; in answer to which the Doctor stated, that bad rice was not known by its price or by its looks, but by its effects; it was sufficient for him to know, that if cholera prevailed, bad rice *must* have been eaten. Another gentleman mentioned the fact of a child labouring under the choleric diarrhœa, and a decoction of rice having been ordered for it as a remedy, and the bowel complaint relieved. The Doctor, who misunderstood the matter, said, "to be sure," it was what he maintained, that rice produced cholera; but, upon being told that he had mistaken the communication, for that it stopped the complaint, "to be sure," he said, the rice having been all carried out of the body, the bowels stopped just *as he* was more successful than others in this disease, by giving purgatives.

One gentleman thought the subject worthy of *deeper consideration*, and that we ought to wait for a few years of cholera experience before we decided this matter. Whether for the benefit of succeeding ages he might wish to have a few thousands more of the present race sacrificed, to enable him to come to his long-drawn conclusions, I do not know; but I think if he requires so much time to make up his mind to a plain fact like this, it is a pity but that he had lived in the time of the antediluvians; he might then, in the course of some few centuries, have arrived at some few conclusions in medical knowledge.

I think, sir, I need not venture further in detailing the different Acts of the representation of this mono-maniacal farce. That the London Medical Society has suffered a disgrace, in tacitly acknowledging the value of such communications, I think is evident to all. As to Dr. Tytler, he is to be pitied: he has evidently been labouring under a delusion for years, and with his prepossessions, who can wonder at the zeal which he has displayed in endeavouring to propagate his rice doctrine? With the melancholy impression on his mind, that rice could occasion cholera and yellow fever, which he stated to have been produced at Cadiz by it, and all other "ills which flesh is heir to;" combining this its means of destroying the human race, with its effects as detailed by him of producing sloughing of the genitals, thus striking at the very roots of reproduction, he must have been horror struck with the notion, that if mankind would so pertinaciously adhere to the eating of rice, that he himself was destined to realize the fiction, and become the hero of the poem of the *Last Man!!!*

In justice to the President, it is right to mention that he endeavoured to bring these mischievous proceedings to an earlier conclusion, but the *sense* (?) of the Society was against him.

By giving the above insertion in the Medical Gazette I shall be much obliged, and I think by it the public may judge how far they need, or need not, be afraid of eating rice.

I am, sir,
AN EYE-WITNESS.

Oct. 23, 1833.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Encyclographie des Sciences Médicales; Réimpression générale des Ouvrages periodiques sur ces Sciences publiés en France, savoir; &c. &c. Tomes I.—X. Dulau.

THIS is decidedly the most remarkable of the Brussels editions that we have yet seen—remarkable as almost all of them are for compactness and cheapness. Whoever wishes to have a complete medical library, and more particularly to keep pace with French periodical literature, cannot do without the Encyclographic. Its striking and chief feature is its economy, both as regards its price and the space it occupies. A single tome, which comes out monthly, contains a whole month's brochures published at Paris; and its capacity is enormous, for it swallows up no less than thirteen distinct periodicals—such as the Annales d'Hygiene, Gazette des Hôpitaux, and Journal Hebdomadaire; together with a long etcetera of *Memoires*, *Theses*, *Bibliographie*, and *Societés savantes*.

A New Method of making Anatomical Preparations, particularly those relating to the Nervous System. By JOSEPH SWAN.

WE are glad to find that this useful and very ingenious work has just appeared in a third edition. It cannot fail to be productive of much good, now that anatomy may be studied above-board, and free from those restrictions which hitherto rendered it a clandestine business. The beautiful productions of Mr. Swan—both his preparations in the College Museum, and his splendid plates of the nerves—must make every anatomist anxious to avail himself of the experience of such a guide; and the information which the author here liberally affords, will shew that he is no churl about it, nor desirous of being reputed a dealer in secret arts.

MEDICAL GAZETTE.

Saturday, November 2, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

RESPONSIBILITY OF MEDICAL PRACTITIONERS.

OUR continental brethren are just now engaged in a discussion in which they they exhibit more *esprit de corps* than we had ever given them credit for: they contend boldly for the indefeasible rights

of the profession; and if they do not go so far as to maintain the infallibility, they do at least the perfect *irresponsibility*, of all medical men who have been regularly educated.

The circumstances out of which this discussion has arisen, occurred not long since, in the vicinity of Strasburg. A physician of Epfig was brought before the authorities, on a charge of malapraxis, preferred by his patient and three medical men:—but we had better give a brief statement of the facts from the lengthened reports before us.

Early in February, this year, a labouring man, while working in a quarry, had his right leg broken by a fall of stones and clay upon it. Both bones were fractured obliquely; there was an external wound, and the tibia protruded. M. Mistler, a doctor of the faculty of Strasburg, was called in. He found the leg enormously swollen; the toe pointed outwards, the heel turned in. He presently reduced the fracture, applied Scultetus's bandage, with splints furnished in the usual way, and finally placed the limb in the suspensory apparatus of Sauter, with due precautions of having the cloths frequently moistened with a cold fluid application. Some gangrenous appearances were perceived at the second visit, but they were treated successfully with chloruret of lime and camphorated spirit. The wound, however, which was occasioned by the protrusion of the bone, continued to suppurate, and threw off small splinters, till about the sixth week, when it cicatrised. About the eleventh week, M. Mistler tried to make his patient walk, but the callus was too weak; so he re-arranged the limb, and recommended it to be left so till it was perfectly consolidated. The leg was at this time as long and as straight as its fellow; there was only observable a slight prominence of about a line at the lower and inner margin of the superior fragment.

Up to this moment the attendance of the Doctor gave the highest satisfaction to the patient and his friends; when all of a sudden he was assailed with a heap of invective: he was accused by them with having maltreated the case, and he was told that other medical men would be called in to try and repair the injury.

Three medical men were accordingly procured—a physician, and two *officiers de santé* (the lowest order of recognized practitioners)—who proceeded to find fault with every thing. They would not hear the expostulations of M. Mistler, who offered to refer the matter to a physician of the town; they cried out against the Sauter apparatus—against the use of splints—against the delay that had occurred in the consolidation, which they said should have been effected in six or eight weeks; and, in fine, they broke the callus, treated the new fracture after their own fashion, and drew up a *procès verbal* against M. Mistler, which was sent to the Procureur du Roi, at Schelestatt.

The cause came on in due time before the tribunal of the first instance. M. Mistler demanded to have the matter referred to the profession; his opponents strongly objected to the demand; and what was most provoking, M. Kling, their advocate, set no bounds to his abusive tirades; he denounced M. Mistler as one of the most ignorant of men, and said that he ought to be expelled from the Faculty. The judges, however, thought proper to appoint professional reporters to decide on the conduct of the parties; and these were M. René Calliot, Dean of the Faculty of Strasbourg, and M. F. Lobstein, Professor of the same learned body, along with M. Serrand, a physician of Schelestatt.

We pass over a long detail of facts

given in the report; but the conclusions at which the respectable referees arrived were the following: — 1. That M. Mistler's treatment of the case had been methodical, rational, and conformable to the principles of the art; that consolidation of a complicated fracture might be retarded for several months, without any blame being attachable to the surgeon; and that the conduct of M. Mistler appeared to be free from all imputation of neglect. 2. That with regard to the charges of the opposite party, they (the reporters) could not sufficiently understand on what grounds they were made; nor could they help entertaining doubts of the fidelity of the statements laid before them. 3. With regard to the patient, it was certain that he would still be some months under cure, but he would not be crippled.

This report was not only signed by the referees already mentioned, but received the full concurrence of M. Foderé, who was consulted by the defendant; and in consequence, the following award was made by the legal tribunal: "That the charges brought against M. Mistler were frivolous and vexatious; that no imputation rested on his character; that the patient had no claim to compensation, but, on the contrary, should pay all the costs; and that M. Mistler might insert in the public papers, at the expense of the patient, a full report of the proceedings."

Such has been the *dénouement* of the affair: now let us come to the remarks of the editor of the *Gazette Médicale* upon it. This spirited writer deplores the circumstances which obliged the defendant to waive his "right of irresponsibility," and to submit to a trial of his peers: and he complains bitterly of one part of the conduct of the referees. "Why have we not found," he asks, "both in the defence of M. Mistler, and in the report of the medical jury, a clear and strong protest in favour of that essential principle of all medical institutions — irresponsibility?" "For," he goes on to argue, "the moment a professional jury give a verdict, whatever it may be, on the conduct of one of their medical brethren, they betray their duty and their rights. Let the verdict be favourable, no matter; for if they have a right to pronounce their approval, they have also a right to censure: and the right of censuring being once vested in medical men to be exercised over their brethren, we cannot sufficiently denounce the mischievous consequences to which the principle may lead. Physicians, we repeat, and we shall never cease to maintain, owe it to their profession to defend their imprescriptible right to irresponsibility. The regularly-educated medical man has given to society all the guarantees that can well be demanded of him: nor can medicine be practised on any less condition. We do not quarrel with the liberality or the ability of the learned reporters: they were actuated, no doubt, by a desire to do the defendant every justice; but we dread to think what might have been the result in other circumstances; and above all we blame them for having neglected to state and to insist upon the grand and fundamental principle of—irresponsibility."

We confess we have been not a little amused by the tone—the almost "Ercles' vein"— in which the matter is taken up by our foreign contemporaries (for other periodicals beside the one just quoted have also discussed the point); we were not prepared to find our continental neighbours, with their existing arrangements of *police médicale*, attempting to make such a stand for the independence and dignity of the profession; and it naturally occurred to us to compare the state of things of which they complain, with what has long been customary among ourselves.

What, it may be asked, would be the

result in this country in a charge of malapraxis like that just now detailed? The court in which it should be tried would depend on the injury done to the patient; were it to prove fatal, an indictment for manslaughter would doubtless be made out; and in a less serious termination, an action for damages would lie. But at all events, if the question of injury were mooted at all, it would be so before a jury of twelve unprofessional men; and the very fact of proposing to refer it to a medical jury, would most probably tend to prejudice the defendant's cause. In a well-known trial which took place a few years ago, Sir Astley Cooper, Mr. Abernethy, Sir Charles Bell, Mr. Brodie, Mr. Travers, and Mr. Green, appeared as witnesses for the defendant, and were unanimous as to the perfect propriety of the surgical treatment he had employed; but the jealousy of the jury was aroused by the very unanimity of so strong a phalanx of authorities; they were told that it was an attempt to tamper with their important and sacred functions; they believed it; and the very thing that ought to have got a verdict for the defendant, proved, owing to the circumstances, the cause of his defeat.

It is but too true, that medical men have not even the most remote legal claim to irresponsibility in this country; and this is to be added to the number of discouraging circumstances under which medicine is pursued in Great Britain. In almost every other calling, an error of judgment may be committed, without entailing serious consequences on the party who has erred. The legislator may be grievously mistaken in his notions of what is for the public good; and the financier may indulge in blunders of political economy, and by so doing cause the ruin of thousands; the barrister, from want of industry or zeal, or from ignorance of the law, or inability to conduct the case, may suffer his client to become the victim of poverty and distress; and who knows not how the "cure of souls" may be abused—nay, converted into their "loss," by the neglect, misconduct, thoughtlessness—nay, the immorality, of a reverend incumbent? Yet who, in any case of individual and even unquestionable injury, would or could bring any of those offending parties to justice? The offence is generally visited only by the censure of those who have immediately suffered from it, or whose minds are for the moment directed to the circumstances; but let there be the least room for imputation on the skill of a medical man, and he is treated as if he had no right to share in the human infirmity of error. It may be very flattering to our vanity, in one point of view, to know that so much perfection is supposed to be attainable in our art; but when we find the same public which visits so unrelentingly the errors that, in the ordinary course of events, will sometimes happen, treating with indulgence and even encouragement the dangerous practices of charlatans—then do we feel that we have a right to complain; and though we do not go the lengths of our professional brethren on the Continent, in claiming to be accounted irresponsible, we certainly think it but just that we should be entitled to a little liberality. Our quacks alone may be said to be irresponsible; for unless they commit some gross and egregious crime, which in any circumstances would draw down on them the heavy hand of the law, they may pursue their ordinary route of petty poisoning, homicide, and swindling, without being called to an account for it by any one. They are *as much* protected by the law of the land as any member of either of the Colleges or corporations; and while they thus enjoy equal immunity, and contrive often to reap more profit than the regularly educated, and are besides

troubled with no qualms of conscience, who that pretend to belong to the profession have better reason to be considered irresponsible?

But the Editor of the *Gazette Médicale* is not only dissatisfied that medical men are held to be answerable for mischances—he thinks it a hardship that they should be tried by their peers. He is inclined to quarrel with the professors of Strasburg for consenting to be umpires between the public and the profession; and though in this instance it fell to their lot to have nothing but what was good and favourable to say of their *confrère*, yet he shudders to think that it might have been otherwise, and that one more precedent might thus have been added to the dangerous proceedings of professional arbitration, and the possibility of passing a verdict of censure on a member of the medical profession.

To us this seems to be the height of fastidiousness. How deplorable might have been the result if the Faculty of Strasburg had declined to interfere, and the eloquence of M. Kling—like that of Brother Cross, or Brother Taddy, in a similar conjuncture—been allowed to operate on the by-standers and the public! In the English trial to which we have already alluded, it is well known how different would have been the result if the verdict had been left to a medical arbitration instead of to an ignorant jury, who knew as much about the difficulties of medicine as they did about the mysteries of Eleusis: and what, we would ask, might not have been the issue of the late investigation at Liverpool, had not the medical officers of the Manchester Infirmary very properly and laudably accepted the reference which was made to them, and maturely weighed the circumstances, and returned their verdict with all becoming solemnity? They did not, indeed, enter their protest against the fitness of such a tribunal; nor did they waste their breath in preaching up the doctrine of medical irresponsibility: it would have been a mere mockery if they had; for the law of the land is explicit on that point. So, we say, let us but have, on all occasions, a fair and suitable jury of our peers, and we shall be content in every case to abide the issue.

MORTALITY OF THE LATE ATTACK OF CHOLERA IN PARIS.

It appears that the whole number of individuals seized up to the 21st inst. was 328, of whom 186 were men, 142 women; but the mortality has been much greater among the latter. Of the 186 men, 72 died; while 73 women out of the 142 fell victims to the disorder; that is to say, the mortality of the males was 38, while that of the females was 51, per cent.

ALDERSGATE-STREET DISPENSARY.

On Saturday evening last, a very numerous and highly-respectable meeting of the Westminster Medical Society adopted unanimously a series of resolutions, which will be found in another page: and addresses to the late medical officers from various parts of the country we are glad to perceive still continue to be forwarded. There cannot be a doubt of the strong sentiments of approbation respecting their conduct which are entertained in all quarters. We have given insertion to several of those addresses, and in our present number one or two more will be found; but we think it needless to go on printing others which may hereafter be sent us: the feeling which prevails is general, and we are happy to find that it has been boldly and unequivocally expressed by all those whose good opinion is worth having. The following letter, which we must say has nothing to re-

commend it to our notice, except the appeal in the first paragraph, may amuse some of our readers, though it will fail to convince any:—

To the Editor of the Medical Gazette.

Sir,

As there are few subjects upon which a difference of opinion does not exist, I shall hold myself excused in giving publicity (should you deem this communication worthy of insertion) to sentiments at variance with the generally *expressed* opinion relative to the late transactions at the Aldersgate-Street Dispensary. I shall consider the subject under three heads:—

1st, As regards the interests of the charity itself;—2dly, The conduct of the late medical officers;—and 3dly, As it affects, or should affect, the characters of the present medical officers.

As I do not consider that the existing law of election either increases or diminishes, in a material degree, the permanent pecuniary interests of the charity, the question rests on the election of competent medical men. The objections to the present mode of election appear to be, that it enables a man to purchase the situation; or, as it is contemptuously termed, *buy himself in.* The inference drawn from this is, that merit without money is excluded.

I regard the benefit to be derived by the patients as the paramount consideration; and could I view the contest as a question of merit, should necessarily advocate the total abolition of every law involving undue influence. But if we consider the motives which induce men to become candidates, and the unavoidable impurities of the modes of election (independently of the law in question,) we shall find that merit forms a very inconsiderable part of their claims. The candidates for such situations are generally young men, known only to their immediate friends, and heard of probably for the first time by the great body of governors, through the medium of their advertisements. Their motives are a laudable wish to obtain a more extensive field of observation, and a justifiable ambition to make it a means of rising in their profession. Men of extensive practice, or already-acquired celebrity, seldom, if ever, enter the arena. It is hypocritical cant to affirm, that such situations are sought after from the pure and disinterested motives of dispensing benefits to our fellow-creatures.

It is impossible, therefore, that the electors at large can know more of their future officers than that they have passed the requisite ordeals, and are all in consequence equally meritorious. Influence, then, of one kind or other, must sway the election, and the merits of a candidate who happens to possess the more powerful interest, or of him who has the heavier purse, stand equally high. It is to me an enigma how the dignity of the profession suffers less in the person of one who stoops (for if it be stooping in one case, it must be so in the other,) to be puffed off by his friends among the governors, than of another who with less influential interest aids his claims by the assistance of his purse.

With regard to the conduct of the late medical officers, they were justified certainly, when left in a minority, but by no means called upon to resign. In opposing the opinion of a majority of the governors, they avowedly acted on a public principle: they resigned from private motives. I call them private, because they had by no means previously ascertained the feeling of the medical public on the question, and because the same law exists in many other Dispensaries in this metropolis, which have, and I trust will continue to have, the benefit of talent no less distinguished. They evinced, moreover, a feeling on the subject of electing successors which can be considered in no other light than discreditable.

It will be perceived from what I have said, that I unconditionally approve of the motives which induced the gentlemen now in office to come forward. There was no return for their predecessors, without glaring dishonour, whilst the law stood as it is; and the majority of the governors insisting that it should so stand, they were to all intents and purposes excluded. There was undoubtedly a feeling in favour of their views expressed by a considerable portion of the profession; but the candidates had good reason, from personal knowledge, to be assured it was not universal, and the medical officers of other Dispensaries, where the objectionable law existed, still continuing to hold their situations, was strongly corroborative of

its being but partial. Under these circumstances, the field being open—the charity in a great measure destitute of the means of relieving the poor — I contend that no other feeling than that of justifiable ambition was necessary to induce candidates to come forward, and that they who have been successful are as free from any charge of having cast a stain on the character of the profession to which they belong, as any who now do, or ever have held, similar situations.

Your obedient servant,

J. J.

October 28, 1833.

WESTMINSTER MEDICAL SOCIETY.

RESOLUTIONS ON THE CONDUCT OF THE LATE MEDICAL OFFICERS OF THE GENERAL DISPENSARY.

At a meeting of the members of this Society, held at the Hunterian Museum, on Saturday, October 26th, Mr. Pettigrew, President, in the chair, it was moved by Dr. Gregory, seconded by Mr. Griffith, and resolved unanimously—

That in the opinion of this Society, the interest of the sick poor, and the respectability of the medical profession, equally require that the appointments to public charities should be free from the suspicion of being open to purchase.

Moved by Mr. Chinnock, seconded by Dr. Ryan, and resolved unanimously—

That in the opinion of this Society, the regulations lately adopted by the Governors of the General Dispensary, Aldersgate-street, permitting any person to attend, and vote personally, who should become a governor seven days prior to the election, amounts virtually to the sale of the professional appointments.

Moved by Dr. Webster, seconded by Mr. Millington, and resolved unanimously, with the exception of Dr. Epps—

That the cordial thanks of the Westminster Medical School are due and are hereby given to Drs. Birkbeck, Clutterbuck, Lambe, and Roberts, and to Messrs. Salmon and Coulson, for their noble and disinterested conduct in resigning their offices rather than tacitly assent to the introduction of a law which compromises the honour and independence of the medical profession.

Moved by Dr. Copland, seconded by Dr. Sigmond, and resolved unanimously—

That the most respectful thanks of this Society be tendered to his Royal Highness the Duke of Sussex, for his liberal and enlightened conduct in retiring from the Presidency of the General Dispensary; thereby marking the sense his Royal Highness entertains of the conduct of the medical officers in resisting the adoption of a most obnoxious and pernicious regulation.

Moved by Dr. Somerville, seconded by Mr. Hunt, and resolved unanimously—

That in the opinion of this Society, any physician or surgeon who shall avail himself of such a law, and thus virtually purchase a professional appointment in any public charity, forfeits thereby his claim to the respect of his professional brethren.

Moved by Dr. Somerville, seconded by Dr. Sigmond, and resolved unanimously—

That the Society pledges itself to bring this, amongst other grievances, before such committees as may be appointed by the House of Commons to inquire into the practice and regulations of the medical profession.

Moved by Dr. Jewel, seconded by Dr. J. Wyat Crane, and resolved unanimously—

That the thanks of the Society are justly due, and are hereby tendered, to the medical practitioners of Sheffield, Cork, Nottingham, and other provincial towns, for their readiness to stand forward in support of the dignity of the medical profession.

Moved by Mr. Stodart, seconded by Mr. Greenwood, and resolved unanimously—

That these resolutions be signed by the chairman, in behalf of the Society, and that they be inserted in the several medical journals, and following daily papers:—The Times, Herald, Chronicle, Globe, and Standard.

T. J. Pettigrew, Chairman.
Edwd. Stodart, Secretary.

ADDRESS FROM MACCLESFIELD.

To the late Physicians and Surgeons of the Aldersgate-street Dispensary, London.

Gentlemen,

As the time is now arrived when it is impossible for observations from any quarter to prejudice the question between the Aldersgate-street Dispensary Committee and the late medical officers of the institution, we, the undersigned medical practitioners of Macclesfield, beg to express our admiration of, and thanks for, the high-spirited stand which you have made against a system calculated to introduce into the profession a mercenary spirit, which would inevitably destroy, in the appointment to public medical offices, competition based upon the honourable principle of superiority of professional attainments.

Elected yourselves, to your late stations, upon worthy qualifications, we consider that you have shewn an elevated sense of

what is due to the profession, and more especially to the public, in preferring to sacrifice your appointments rather than to consent to a measure which would quench the spirit of medical emulation, and consign the interest of the indigent sick to the care of the best bidders for the charge—who, of course, would be the least dignified members of the healing art.

At a period when the public has decidedly declared itself against bribery and corruption in all the great institutions of the country, we feel that any attempt to pollute the medical profession with such debasing means ought to be treated with public obloquy; whilst the most honourable testimony should be rendered to those men who have stood forward to ward off, at all personal risks, so degrading an infliction.

To you, then, gentlemen, we offer our sincere thanks for your manly resistance of the objectionable measure introduced by the Committee, and we feel confident that the profession at large will, with us, consider your retirement as an honourable self-devotion in the defence of principles which, though for a time suspended, must eventually triumph over the sordid spirit of pecuniary influence, applied to a liberal science.—We have the honour to be,

Gentlemen,
Your obedient servants,

Thos. Slaeke, M.D.; Thomas Roberts; James Cockson; F. F. Lallemand; John Fleet; George Bostoek; John Braithwaite; Thos. Swanwick, M.D.; W. B. Dickenson; Edward Milner; Edward Foden; John Birchnall; John Waggstaffe; Thomas Hordern.

NORTHAMPTON MEETING.

VOTE OF THANKS TO THE LATE MEDICAL OFFICERS OF THE ALDERSGATE-STREET DISPENSARY.

Northampton Infirmary, Oct. 5, 1833.

At a numerous meeting of the members of the medical profession resident in this and the neighbouring counties, held at the Infirmary this day, the following resolution was adopted unanimously, or rather passed by acclamation:—

"That this meeting, taking into mature consideration the nature and bearings of the dispute betwixt the Governors of the Aldersgate-street Dispensary and the late Medical Officers of that institution, are unequivocally of opinion that the said officers have vindicated their own honour, and the honour and dignity of the medical profession, in the noblest manner, by resisting a regulation which strikes at the root of honourable and talented competition for medical offices, and opens the door to ill-disguised venality and intrigue.

"This meeting is furthermore of opinion, that the late medical officers of the Aldersgate-street Dispensary, by the spirited and independent manner in which they have acted, are well entitled to the support and sympathy, the thanks and applause, the approbation and admiration, of the profession at large.

Signed by A. Robertson, M.D.
Chairman,

and 50 other Medical Practitioners.

MEDICAL GALVANISM.

M. Palabrat has been engaged for some time past in endeavours to discover the most convenient method of introducing remedial substances into any part of the body, by means of a galvanic current.

That this can be effected is easily shewn by employing such chemical agents as exert a visible and easily obvious re-action upon each other; thus, if we lay a compress well wetted with the hydriodate of potass upon one arm, and upon the other a solution of starch, a fine violet colour is immediately manifested upon establishing the circuit; if iodine be used, instead of the hydriodate, it is speedily found deposited upon the starch. It may be said that the substance which is thus invisibly transmitted from one part of the body to another, follows the surface of the skin, and is not conveyed directly through the interjacent textures, which are the moist conductors and firm part of the galvanic arc. M. Palabrat is of a different opinion, and rests it on some experiments, in which he not only well dried the skin of the arms, but covered a part of it with a gum-lac varnish; and yet there was not any interruption to the galvanic phenomena. By proper management, the medicinal substance which we wish to be transmitted, may be caused either to remain in the body of the patient or to be withdrawn from it. If we desire the former, it will be necessary to employ acupuncturation at the same time.

M. Palabrat assures us that he has met with very satisfactory success in the treatment of some cases which had resisted all ordinary remedies: he mentions particularly a case of enormous sarcocele, and one of obstinate quartan fever. In the former, iodine was passed through the tumor; in the latter, quinine was introduced into the system.

The memoir was intrusted to MM. Magendie, Becquerel, and Savart, who are to report upon it.—*Med.-Chir. Rev.*

POISONING BY THE FUMES OF ARSENIC.

A MAN, who was a manufacturer of the blue pigment used in painting china, and his servant, were engaged in boiling a mixture of nitric acid, of cobalt, and of arsenic. All of a sudden the mattrass burst with an explosion, and the room was filled with the fumes. The servant leaped out at the window, and thus saved himself; his master was less fortunate—he was knocked down, and found himself incapable of rising; he lay on the floor, till his servant returned by the door to drag him out. After eight days' most severe suffering, he died: his body had become enormously swollen. This was the case with the servant also, but in a less degree: in the course of forty-eight hours the abdomen was as large as that of a woman at the full period of pregnancy. He was taken into the Hôtel Dieu, and derived much relief from purgatives and baths. On the third day after his admission, he passed a quantity of fœtid gas from the bowels, and experienced immediate comfort. The tympanites was gone, and he left the hospital well.—*Ibid.*

SPECULUM URETHRÆ.

M. GUILLON has presented to the *Societé de Médicine Pratique* of Paris an instrument by which he can see the ulcerations to which the mucous membrane of the urethra is subject. His speculum consists of a very delicate silver tube, highly polished in the interior, and about four inches and a half long. Eleven-twelfths of its length is provided with an opening equal to two-thirds of the diameter; its borders, of course, rounded and turned in, to provide against accidents. At the extremity is a small telescopic reflector, suitably inclined. Another reflector, five inches in diameter, and shaped like a truncated cone, is then so adapted as that, by the agency of a common lamp, light may be thrown in on the interior of the passage; and thus the affections of the anterior three-fourths of the spongy part of the canal may be very commodiously discerned. —*Gazette des Hôpitaux.*

BRISTOL MEDICAL SCHOOL.

IT gives us much pleasure to find that Bristol is no longer without its complete medical school. The new establishment was opened on the 14th of October, under the auspices of Dr. Carrick, who delivered a very interesting address on the occasion. Mr. Hetling also made an inaugural oration on the subject, in commencing his surgical course at the Infirmary. We have received reports of both, but are sorry we cannot find room for any extracts.

DR. ASHBURNER has requested us to notice an inaccuracy which occurs in his article on *Dentition*, at p. 109, col. 1, l. 27, of our last number. For the sentence commencing "Serres remarks," &c. and ending "of a nature *sui generis*," he wishes the following to be substituted:—

"Serres remarks, that the external membrane has a decided elasticity, and compresses the fluid, which, with Hunter, he places within the inner membrane.—(Essai, p. 13.) The external is, according to Meckel, more spongy, lax, and soft, and more thick than the internal membrane, which Serres declares to be very thin, transparent, and of a nature *sui generis*."

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Oct.* 29, 1833.

Abscess	1	Fever, Scarlet	20
Age and Debility	47	Fever, Typhus	2
Apoplexy	4	Heart, diseased	1
Asthma	13	Hooping-Cough	13
Cancer	1	Indigestion	1
Childbirth	1	Inflammation	35
Cholera	2	Bowels & Stomach	3
Consumption	71	Brain	5
Constipation of the Bowels	1	Lungs and Pleura	10
Convulsions	34	Liver, diseased	3
Croup	3	Measles	10
Dentition or Teething	5	Mortification	2
Diabetes	1	Paralysis	4
Dropsy	13	Small-Pox	8
Dropsy on the Brain	11	Spasms	2
Dropsy on the Chest	3	Stone and Gravel	1
Dysentery	1	Thrush	4
Erysipelas	1	Tumor	1
Fever	6	Stillborn	13

Increase of Burials, as compared with the preceding week . . . 12

METEOROLOGICAL JOURNAL.

Oct. 1833.	THERMOMETER.		BAROMETER.	
Thursday . 24	from 39	to 60	29·63	to 29·55
Friday . . 25	44	60	29·43	29·39
Saturday . 26	41	58	29·39	29·50
Sunday . . 27	37	60	29·61	29·66
Monday . . 28	37	59	29·60	29·70
Tuesday . . 29	35	62	29·70	29·76
Wednesday 30	39	61	29·89	29·97

Prevailing winds, N. E. and S. E.

Rain in the night of the 27th, otherwise generally clear.

Rain fallen, ·15 of an inch.

CHARLES HENRY ADAMS.

ERRATA.

In Mr. Maclure's paper in our last No. page 116, line 31st from top, *for* "history," *read* "state;" and in the same page, line 19th from bottom, *for* "state," *read* "fate."

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 9, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture V.

DISEASES OF THE JOINTS OF THE PELVIS.

We shall commence the lecture of to-day, gentlemen, by the consideration of some diseases affecting the joints of the pelvis.

Acute inflammation of the symphysis pubis.

The symphysis pubis is liable to acute inflammation of the most violent kind, sometimes springing up spontaneously, but more frequently the consequence of injury, and generally observed after parturition,—especially if the labour has been lingering—the result, in all probability, of pressure on the inner ligament of the joint during the passage of the child's head.

Symptoms.—It is usually ushered in by shiverings, and attended with symptoms of high inflammatory fever. We observe, therefore, a quick hard pulse, great heat and dryness of skin, furred tongue, thirst, wakefulness, and all the other signs of inflammation, which it cannot be necessary for me to particularize. Besides these general symptoms, there is intense pain in the situation of the symphysis, very much aggravated by pressure, or by the least motion of the body. A great tendency towards the suppurative action exists. It is more than probable that in a few hours, at any rate in two or three days, after the inflammatory symptoms appear, pus becomes effused within the structure of the joint; and if the patient survive, it makes its way out by ulceration; but if her constitution is weak, or the disease very violent, she may perhaps sink before this process is completed. The formation of pus is attended with an exacerbation of the symptoms; occasional shiverings at irregular intervals occur; the fever increases to a certain height, and then assumes the typhoid character; and painful throbbings of the part are experienced. The presence of pus being indicated by such signs, it may be positively ascertained by an examination of the articulation itself. In making such an examination, we must bear in mind the thinness of the ligaments within, when compared to the external fibres. We must place two fingers, introduced into the vagina, on the inner surface of the joint; and I think it would be possible to detect a very minute quantity of matter, by the sense of fluctuation communicated.

We are aware of the great constitutional disturbance consequent on matter being confined within unyielding structures, such as bone and ligament; we see this exemplified most particularly in the finger, when pus is effused under the tendinous expansion—the theca; and if so small a quantity as can collect there produces such violent irritation, how much more likely is the patient to suffer when, in this greater space, a proportionately copious secretion may be formed; indeed, what we should *à priori* suppose, we find practically to be the case.

Treatment.—The disease is certainly rare, but it is of a highly dangerous character; it is very rapid in its course, and requires to be combatted by decisive measures. In the first instance then, if the patient be plethoric, blood should be taken from the arm; but if she be of a more weakly constitution, not a resident of the country, but of a crowded city, we should perhaps scarcely be warranted in general bleeding; we must in that case, as far as depletion is concerned, be satisfied by the application

of leeches. On these means, in conjunction with low diet, keeping the patient in a state of perfect rest, using fomentations, and exhibiting saline purgatives, diaphoretics, digitalis, and opiates, if required, we must most particularly rely for effecting the resolution of the inflammatory action, and mitigating the attendant suffering. We may probably prevent suppuration taking place, if we attack the disease in its early stage; but matter having been formed, let us not wait for its natural evacuation, by the slow process of absorption and ulceration, but let us at once puncture the ligament, and let out the fluid by surgical means. We shall be naturally led to make the opening where the matter points. This will most likely be internally. The operation in itself is trifling, but we run great risk of wounding the neck of the bladder and urethra, placed immediately behind the symphysis, which organs we must take special care to avoid.

CHRONIC INFLAMMATION OF THE SYMPHYSIS PUBIS, ATTENDED WITH DISORGANIZATION OF THE JOINT.

This articulation is described as also subject to another kind of inflammation, even more dangerous than that I have just spoken of, because it is supposed to be of a malignant nature. It is slower in its course, and under it, disorganization of the joint takes place, by a process nearly similar to what occurs in the white swelling of the knee and other parts of the body.

This is an affection that I have never met with; we are however told, that it usually occurs in females who have that soft, smooth, delicate, transparent skin, the beauteous characteristic of scrofula. Inasmuch as the disease is not of an acute kind, it runs on less rapidly than the last I mentioned towards its termination; but if not arrested, it proceeds always in a sure and destructive course;—the inflammation continues, matter is formed, ulceration occurs, the pus escapes externally, and is of a sanious, fœtid character, differing in appearance materially from a healthy secretion. During the suppurative process, the patient wastes gradually away, till at last she sinks under symptoms of hectic fever.

Symptoms.—The malignant character of the disease may be ascertained by its not being so violent at its commencement, nor so rapid in its course, as the acute inflammation;—by the attendant fever bearing a low type even from the beginning;—by the slowness with which the suppurative action progresses, and by the aching pain which accompanies it.

Treatment.—In the treatment, it is of the greatest consequence to prevent, if possible, the formation of pus: so long as we keep the inflammation below the point at which matter is generated, so long we keep the disease at bay, and the patient in a degree of comparative security. This will be best done, not by the violent abstraction of blood from the arm, but by applying three or four leeches every few days over the seat of the disease;—by rest;—by mild aperients, and moderately nourishing, but not stimulating diet,—supporting the strength, indeed, at a certain level, but shunning any thing likely to excite increased action in the part affected. It has been suggested by a great obstetrical and physiological authority in this town, that a chance of cure might be afforded by sawing off the ends of the bones, and taking away the entire piece of the symphysis pubis. He suggests the possibility of resorting to this method when the disorganization of the joint is complete, and when there is no hope of saving the patient's life; but does not go the length of recommending the operation. In the present state of our surgical knowledge, I think that man must be a bold practitioner who would undertake such a hazardous expedient. I should be sorry even to sanction it; partly in consequence of the great danger there must necessarily be of wounding the bladder, as well as injuring the other pelvic contents; and partly in consequence of the slight probability we should have of producing even ligamentous union. In such a large space as would be unoccupied by bone, it is not to be expected that a consolidation by osseous matter would take place: we *might* have a fibro-cartilaginous deposition, but I think we ought not to look even for that. To say nothing of the danger immediately attendant on such an operation, I should fear inflammation and gangrene of the bladder; I should fear that inflammation spreading to the peritoneum and the abdominal viscera; and I can scarcely suppose that the woman would survive it.

RELAXATION OF THE LIGAMENTS OF THE SYMPHYSIS PUBIS.

Another disease of the symphysis pubis, one which is of more frequent occurrence than this malignant disorganization, is a relaxation of the ligaments of the articulation, under which state the bones are capable of being separated to a certain extent; and they move readily one upon the other. This is an affection not very clearly understood, either as to its origin, or perhaps exactly as to its progress. It sometimes may arise independent of pregnancy, but it is more frequently met with during the last months of utero-gestation, and after labour.

Symptoms.—The patient first feels a little uneasiness in the part; she then complains of considerable weakness: this by and by

amounts to actual pain: she finds she cannot walk without a great deal of suffering, and without making a great effort; so that she is compelled either to continue in a sitting or a recumbent posture. When she rises, she feels as if the pelvis were dropping to pieces, places her hands on her hips in order to support herself, and if an assistant embraces her pelvis firmly, she acquires a degree of strength which perhaps enables her to stand. We shall find that she presently ceases to walk, takes to an easy chair, then to the sofa, and at last becomes almost bed-ridden. She is sensible of a grating sensation in the part when motion is attempted, and the same feeling is communicated to the hand of a person examining. If, however, the disease appears soon after labour, the patient will probably first discover it on turning in bed; she will be suddenly seized with an acute pain, followed by indications of evident relaxation.

Treatment.—I am not aware that there are any *specific* means in medicine for curing this disease; it has been known to last for months, and even years; but still we may palliate the inconvenience which the patient suffers, and we may perhaps in time effect a cure. That plan by which we shall be most likely to succeed, is by endeavouring to brace the system through remedies most usually employed for that purpose. Tonic medicines may be given, taking care to keep the bowels regular; sea-bathing and sea air are serviceable; and so also (as Dr. Denman, with his usual judgment and acuteness, observes) is plunging the hips into cold water once or twice a day, or even more frequently. These are the means that have been found of the greatest service. To palliate the inconvenience, and as a source of comfort to the patient, we should recommend her to use a strong inelastic belt, made of jean, or some other such unyielding material, tightly drawn around the pelvis, so as to give the joint a degree of artificial firmness. But after all, I am afraid that surgery and medicine will avail us little. Nevertheless, it would not be right to neglect those means that are placed within our power. The same authority whom I have just alluded to has suggested, whether it might not be possible, in desperate cases of this kind, to produce ossific union by passing the point of a knife between the extremities of the bones, so as to excite inflammation and a new action in the part; on a principle similar to that which guides us in the treatment of ununited fractures. I can see no reasonable hope, however, that such a proceeding would lead to the deposit of bone, since the structure of the part into which the instrument would be directed is not osseous, but of a fibro-cartilaginous nature: at any rate, before we had recourse to such a violent remedy, we should attempt to induce this desirable action by setons, issues, and other similar surgical auxiliaries which are known to produce occasionally such powerful effects.

INFLAMMATION OF THE SACRO-ILIAC SYMPHYSES.

Inflammation sometimes attacks the sacro-iliac symphysis. Whether this increased vascular excitement pervades the whole of the surface, or is confined to one or both sets of the connecting ligaments, is a point which I cannot exactly determine: perhaps it is sometimes confined to the ligaments, and at others affects the entire joint. However, even if it should run through the whole of the articular surface, there is not the same disposition here to the formation of matter that there is when the symphysis pubis is inflamed.

The disease usually occurs after lying in, and the patient has suffered a lingering labour. Perhaps the history of a case that occurred to me not long ago will give you a better idea of the complaint, than describing it in the ordinary manner. I was called one morning to see a woman, about a mile from my own house, who was said to have had a number of children, and to have been in labour all night, suffering strong pains. I obeyed the summons immediately, and on arriving at her bed-side, I found she had just been delivered of a dead hydrocephalic fœtus: its head measured sixteen inches round, and contained exactly one pint of fluid; it had passed whole. The woman had a capacious pelvis: the head descended through the brim, and in consequence of the cranial bones being so widely separated from each other, by the water contained within the skull, and so mobile, it insinuated itself into the irregularities of the pelvic cavity, and continued firmly imbedded there for a number of hours, making pressure upon almost every part within. Finding the patient delivered, and apparently doing well for the time, I merely prescribed some opiate; but on visiting her the third day after delivery, I found she was labouring under acute fever, attended with excessive pain on one side, in the situation of the sacro-iliac symphysis; to such an extent indeed, that she could not move even her leg without great agony, nor permit the least pressure over the joint. Knowing the kind of labour she had gone through—bearing in mind that the pelvis, formed on the principle of a double arch, although capable of resisting great force when applied externally, must suffer most severely under any straining pressure from within—and having no doubt that the ligaments connecting the bones together

must have been subject to extraordinary extension—I had no hesitation in forming an opinion that inflammation of the joint itself, or of the ligamentous tissue, had supervened. She was accordingly treated by bleeding, leeches, fomentations, purging, low diet, and saline medicines; but she was obliged to remain in bed for nearly two months. This length of time elapsed before the inflammatory action could be said to have entirely subsided, and even then, for months afterwards, great weakness continued in the joint, and she could not move without considerable difficulty and inconvenience, almost amounting to pain. Eventually she got well.

RELAXATION OF THE LIGAMENTS OF THE SACRO-ILIAC SYMPHYSES.

The ligaments connecting the sacro-iliac symphyses may become relaxed, as a consequence of pregnancy, and sometimes after parturition. I believe this state has never been observed independently of child-bearing. My esteemed friend, Sir Charles M. Clarke, who has published an excellent work on some female diseases, has given the history of a case of this kind, perhaps the best we have on record. The lady was under Sir Charles's care for months. All the means were tried which I have mentioned to you, and she derived the greatest advantage from a broad belt totally embracing the hips. The action inducing this morbid state is similar to that, whatever it may be, by which the ligaments of the pubes become relaxed; and the symptoms, except as far as the situation of the pain is concerned, nearly the same. The mode of treatment would not materially differ. I should think we have a better chance of curing a relaxation of the posterior joint of the pelvis than of the symphysis pubis, inasmuch as there is here a larger articular surface, and altogether a greater quantity of ligamentous fibre.

FEMALE ORGANS OF GENERATION.

We shall now proceed to the consideration of the organs of generation in the female, which are divided into external and internal; and the boundary between them is considered to be that film of skin passing across the entrance of the vagina, called the *hymen*.

EXTERNAL ORGANS.

The external organs of generation are the *mons veneris;* the *labia externa*, or *labia pudendi;* the *perineum;* the *clitoris*, with its *prepuce;* the *nymphæ*, or *labia interna;* the *meatus urinarius;* the *hymen;* and the *carunculæ myrtiformes*.

Mons veneris.—Placed at the lower part of the abdomen, lying immediately over the symphysis pubis, we have a soft cushion-like eminence, of about three inches in breadth, and two in depth, to which we give the name of *mons veneris*. It is formed of a large quantity of loose cellular tissue, the interstices of which are filled with much adipose matter: it is covered by the common cuticle of the body; studded with a number of short bristly hairs, and among their roots we observe numerous mucous follicles, which secrete a fluid of a peculiar odour.

Labia externa, or labia pudendi.—Running down perpendicularly on each side, to unite at a junction below, are situated two pouting lips—the *labia externa*, or *labia pudendi*. In length they are perhaps three inches, and in structure they exactly resemble the mons veneris; the commissure at which they join is called, after the French, *fourchette*, and is somewhat similar to the junction of the skin at the roots of the fingers. It is the anterior boundary of the perineum.

Perineum.—The *perineum* is that part of the body which extends from the lower union of the labia externa back towards the anus: in structure it very much resembles the parts just described. It is formed of a large quantity of loose cellular substance, not, however, containing a great quantity of fat, and but scantily studded with hair. In length it is about an inch, or an inch and a quarter, under the quiescent state of the parts; but when the child's head is pressing externally in labour, it is capable of distention to three, four, or five inches; and in the same degree that it is extended in surface, it becomes thinned in substance. I shall hereafter have frequently to mention the perineum. It is to this part of the body that in natural labour the obstetrician is required to direct a principal portion of his attention, for the purpose of preventing laceration and injury. By some anatomists the space lying between the fourchette and anus is denominated the anterior perineum, in contradistinction to that situated between the anus and point of the os coccygis, which they call the posterior perineum; but I shall follow the more usual description, and consider this *par excellence*, "the perineum." These parts altogether constitute the *pendulum* or *vulva;* so that by the vulva we mean that division of the external organs which close and surround the genital fissure.

Fossa.—On separating the labia externa, we perceive a line of demarcation distinctly evident in each, where the skin of the body terminates and mucous membrane commences. This continuation of the mucous into the cuticular structure is exactly similar to the arrangement observable in the openings of other cavities—as the anus, nose, and male urethra. Carrying our investigation beyond the external surface, we

observe a cavity within, which, in the virgin, is bounded posteriorly by the hymen. This hollow has obtained the name of *fossa navicularis*, *vestibule*, or *concha*, and it contains, within its precincts, the elitoris with its prepuce, the nymphæ, and the meatus urinarius. Here [presenting a specimen] is the fossa, with a perfect hymen, in a preparation taken from an elderly woman.

Clitoris, with its prepuce.—The *clitoris*, then, is observed to be placed rather above and before the lower edge of the symphysis pubis. It is a little round body, about the size of a pea, shrinking and screening itself, as it were, from the gaze of the curious, by a small hood which is thrown over and around it at the sides. When I call this little prominence the elitoris, you must understand that it is only a part of the organ which we discern, for the principal portion is hidden under the mucous membrane lining the fissure. The elitoris, in formation, bears a great analogy to the male penis: it resembles it, indeed, in every respect except two—its small size, and its not being permeated by the urethra. Like the male penis, it is formed of two crura, which arise within the rami of the ischia and pubes, one on each side, run up to the junction of the bones at the symphysis, and there form the corpora cavernosa. At the extremity of the corpora cavernosa is placed the glans, which is the only part we can observe by the eye, the others being imbedded between the mucous membrane and the bone. Above the glans projects the duplicature or fold of the membrane, called the *preputium clitoridis*, which seems designed to shade this little bashful body and protect it from external injury. The clitoris is the most nervous part of the external organs, though they are all quite sensitive enough. It is capable of distention in the same way as the male penis is. It is liberally supplied with blood from the pudic artery, and also with nerves from the pudic fasciculi,—branches principally of the second and third sacral.

Nymphæ.—Taking their origin from the clitoris, and sometimes arising from the preputium clitoridis, we have two other folds of mucous membrane distinctly visible, running parallel to the labia externa, which are called *nymphæ*, or *labia interna*. They are ultimately lost at their termination in the general lining of the parts. Now the nymphæ appear to be nothing more than membranous rugæ, two layers joined together by cellular structure. They are supposed to be placed here to direct the stream of urine externally, lest it should extravasate in the lower part of the fossa. But there is no doubt that these folds, together with the prepuce, are of great use in permitting distention of the parts during labour, without rupture. We all know that mucous membrane is not so elastic as the skin of the body; and we know that in organs subject to the variations of relaxation and distention, the membrane is always collected into folds, differing in number and arrangement as best suits the purpose intended. This is very evident in the gall and urinary bladders; we see it also exemplified in the stomach and intestines, and it is particularly strongly marked in the vagina itself. These folds, then, appear to be purposely placed here, in order to allow the distention of the membrane during the passage of the child's head without laceration of the part. In some of the African tribes, as the Hottentots, the nymphæ are so long as to hang like pendulous flaps between the thighs, reaching nearly half way to the knees. Among the Egyptian Arabs, the Christians in Abyssinia, and in Asia on the shores of the Persian Gulph, girls are commonly circumcised. According to Dr. Winterbottom, the same practice is occasionally resorted to at Sierra Leone. The operation consists in removing the nymphæ and prepuce; and it was evidently established to prevent the stagnation of the secretions, which in the eastern world are much more profuse than in colder climates, and might irritate either by concreting or becoming putrid.

Groove between the nymphæ.—Between the two nymphæ, running from the glans clitoris downwards and inwards, towards the lower edge of the symphysis pubis, we observe a smooth groove, of great consequence to be attended to by the surgeon and obstetrician, for which, singularly enough, we have no name in common use. Although anatomists are so fond of multiplying terms, and giving names to the most trivial points of structure, the generality of them have deigned no designation to this groove—certainly as highly deserving of special notice as many parts for which high-sounding appellations have been devised. It might, with some propriety, be styled, the *itur ad meatum urinarium;* or, if a shorter name were thought advisable, the *urinary arcade*. By some writers, indeed, it is called the *vestibule;* but more frequently, I believe, the latter term is applied to the general cavity anterior to the hymen.

Meatus urinarius.—At the further extremity of this groove is situated a small aperture, sufficient to admit the barrel of a goose-quill — the *meatus urinarius*, the mouth of the urethra—which is the passage into the bladder. It behoves us to learn the situation of this aperture most particularly, because of the frequent necessity there exists to evacuate the bladder by artificial means, as well under labour as

also under different states of disease; and it is most desirable that we should introduce the catheter, not by the aid of the eye, but the sensation of touch alone. Unless we inform ourselves of the exact position, shape, and dimensions of this opening, we may be foiled in our object, to the great distress of our patient, and probable loss of our own professional character.

We must not expect to meet with a wide, gaping, open-mouthed canal, into which we can pass the finger without trouble; but we are to seek for a slightly-projecting, circular rim, having an aperture in the centre, closed, and apparently scarcely large enough to admit the introduction of a small wire. We shall encounter it just below the symphysis: occasionally it is retracted rather within, and sometimes is protruded more externally. In lingering labour we are especially liable to be perplexed in our exploration; partly by its situation, perhaps, being somewhat altered; and partly by the confusion of the organs attendant on distention, and the tumefaction consequent on pressure. I shall take another opportunity of speaking more fully on this subject.

Hymen.—The next of the external organs which I have to mention is called the *hymen*—a very delicate membrane, generally of a semilunar shape, placed at the entrance of the vagina, and forming the posterior boundary of the external parts. It is well displayed in the preparations on the table; but you will perceive, as they pass round, that there are scarcely any two of them in which it possesses the same shape. Its general figure is semilunar, with the opening upwards. Sometimes the aperture is central, and serrated on its inner edge; at others, the membrane is stretched entirely across the parts, possessing a number of small punctures; it is then called cribriform: and occasionally it is found impervious, when it is considered a malformation, and gives rise at puberty to a train of morbid symptoms, which we shall hereafter more particularly notice.

The name of hymen was given to it after the Greek word ὑμην, a membrane. From its bearing most frequently a crescent shape, this membrane has been fancifully pictured as the origin of the characteristic symbol of the virgin goddess, Diana; as though she carried on her brow the stamp of her purity. It is a pretty poetical idea, but we can trace her typical figure to a much more probable source. Diana, in the beautiful poetry of the heathen mythology, was identified with Luna; and it is most likely she derived this distinctive emblem from the crescent moon.

The hymen is merely an extension of the mucous membrane of the part, and is in general extremely thin. It is usually ruptured in the first sexual intercourse, but by no means universally so. Upon its destruction, the membrane disappears, and has been supposed to dwindle into a number of little eminences, which have been called, from their fancied resemblance to myrtle-berries, the *carunculæ myrtiformes.* The idea, however, formerly entertained, that these carunculæ were the remains of the broken hymen, has been pretty well disproved by the observations of Dr. Hamilton, of Edinburgh, and my friend, Dr. Blundell. These physiologists have clearly shewn that both may exist together in the same subject; and we can therefore no longer consider the carunculæ myrtiformes as the remains of the ruptured hymen. All the organs within the genital fissure are profusely supplied with blood from the internal iliac arteries, and with nervous influence from the pudic branches. They possess also numerous absorbent vessels, which communicate principally with the inguinal glands.

The hymen is an interesting part of the female body in many respects, and it has therefore been more noticed than so small a fold of skin would seem to deserve. Many naturalists (among whom I may mention Ambrose Paré, Palfyn, Pinæus, Columbus, Dionis, and Buffon,) have been led to question the existence of this membrane altogether, in consequence of its being found in woman alone; and in her only during the virgin state. The proof, however, is easy, from direct demonstration. It is surprising that such a close and accurate observer of nature as the Count Buffon should so strongly deny its reality. I think if he had seen the preparations on the table he would no longer have remained in doubt about its existence. His experience, however, must have been formed from what he had observed in French women; and he lived not in the most moral age of that nation. These specimens, on the contrary, were taken from females of our own country.

The presence of the hymen was, in former times, considered a sure test of virginity; in consequence of the supposition that it was invariably ruptured during the first sexual access. The prejudices founded on this opinion were so deeply rooted in the minds of the ancient Eastern nations, particularly the Hebrews, that it was the custom with them to submit to a jury of matrons the linen of the bride after marriage; and if it was found to be stained by drops of blood, such as would proceed from the rupture of this membrane, she was considered of spotless character, and honoured accordingly: should such an appearance, however, not present

itself, she was declared to have been previously deflowered, the marriage was dissolved, and the degraded bride punished with ignominious death. Moses, in the 22d chapter of Deuteronomy, has instituted an express law on this subject. He ordains, that if a man, having taken a woman to wife, reports that he found her not a maid, her father shall collect the tokens of his daughter's virginity, and "shall lay the cloth before the elders of the city." If the statement of the husband prove false, he is to be severely fined; but if true—that is, if no spots of blood were observed—the woman was condemned to be stoned to death. Such was the prejudice then connected with this membrane; and the opinions founded on the commands of so highly venerated a personage, necessarily obtained great weight, and prevailed universally through many centuries. Even now we sometimes remark the remnants of their powerful influence; but the more civilized countries have adopted more just, humane, and honourable sentiments. They do not consider the absence of the hymen as a proof of previous defloration, because they are aware that it may be destroyed by many trifling causes; much less do they estimate the moral character of their brides by the stained appearance of their linen. They have learned also, from experience, that sometimes this membrane is not ruptured by the first, nor many subsequent connexions; so that its presence can be no test of purity, nor its absence of immorality.

Its use is somewhat wrapped in mystery. If it be true, however, that of all female nature woman alone possesses it, the most immediate and apparently natural conclusion at which the mind would arrive, must be, that it was placed at the entrance of the vagina for a moral purpose—that the knowledge of the possession of such a tell-tale membrane might deter female youth from the commission of crime and the fear of subsequent detection. Haller was an advocate for the opinion that it owned a moral origin, and many philosophers have embraced the same idea. It would be to me, indeed, most painful to believe, that, with the other sex, a sense of duty and propriety had less influence in the preservation of their chastity than the apprehension of the shame attendant on detection. I shall leave the subject without giving an opinion, as I consider it far removed from a medical question.

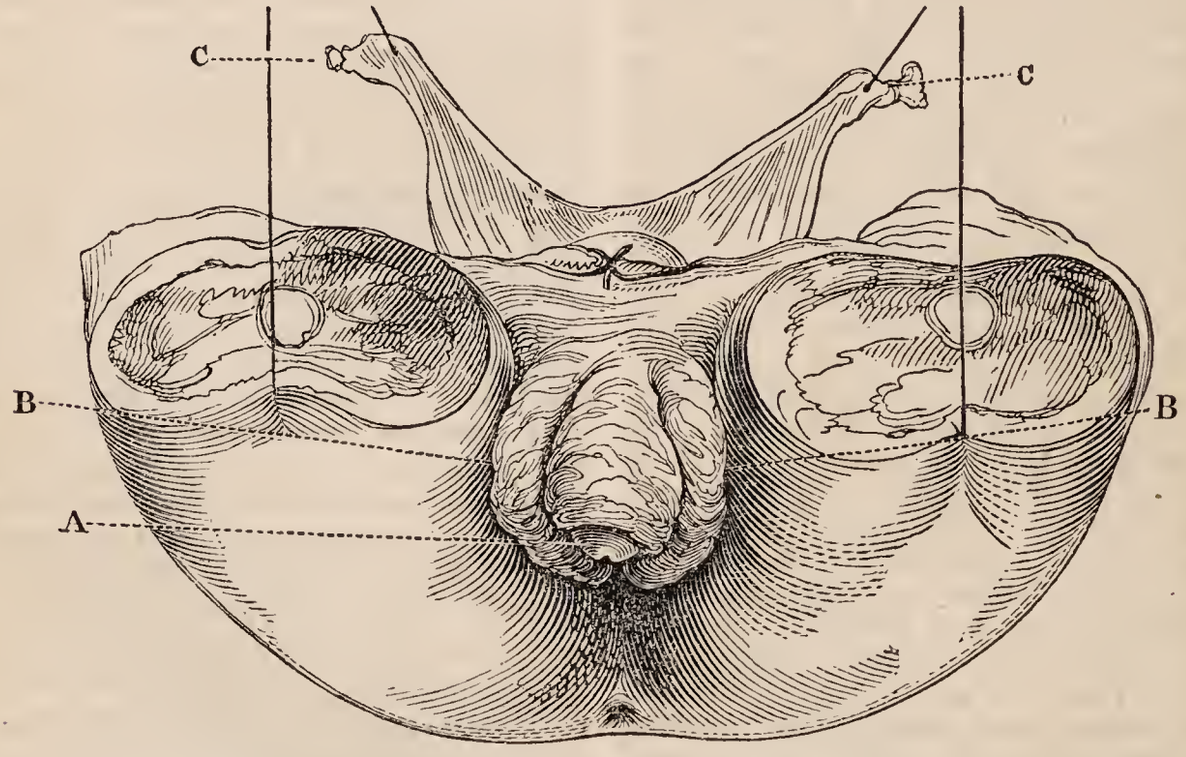
At the same time it is necessary to inform you that many writers, among whom the great naturalist Cuvier is included, have affirmed that several mammalia possess a perfect hymen, and some a constriction at the entrance of the vagina, apparently an imitation of, or substitute for, the hymen. Among the first are noticed the northern manati, or sea-cow, the elephant, mare, and ass; among the latter, the otter, dog, cat, and many ruminating animals. Blumenbach, on the contrary, asserts that he never could find a hymen, or any trace of one, in monkeys or baboons, and his search was equally fruitless in the female elephant. Camper, also, relates that in a female ourang-outang which he dissected, although the subject had not arrived at puberty, nothing like a hymen was apparent. We know that in many points of structure this species of the simia approaches more nearly to the formation of the human being than any other known animal; and we might, without the least violence to reason, presume that the hymen, if it existed in any of the inferior orders of the mammalia, would be met with here. The late Mr. Joshua Brookes possessed a dried preparation of the genital organs of a young filly, in which he attempted to demonstrate a hymen. I have most carefully surveyed this specimen many times, and could never detect any appearance at all similar to the human membrane.

If you examine the preparations before you, you will observe the great difference displayed in the parts where the hymen is perfect, and where it has been ruptured. Now it may be a matter of consequence to be able to ascertain whether or not the hymen is present. In a case of alleged rape we may be called on judicially for an opinion; and if the hymen were discovered perfect, it would lead us to doubt very much the truth of the charge, although it might not be sufficiently conclusive to warrant us in declaring positively that the crime had not been committed. Again, a tough hymen, or partial adhesion of the labia, may prevent the consummation of marriage, by impeding sexual intercourse. Under such circumstances the parties may be induced to apply for medical advice, and our practice may probably differ as the one or the other state is discovered to be the cause of the obstruction.

It occurred to me once to be consulted on a very delicate subject. An elderly lady brought an exceedingly interesting young girl, her daughter, to me, who was about to enter on the marriage state; but being induced to make some particular inquiries, and finding her daughter formed so differently from what she supposed herself to be, she fancied there was a barrier which would prevent sexual communion, and that some surgical operation was necessary before the marriage rights could be performed. The impediment which appeared to the mother to be of such a very serious and extraordinary description,—so strong

and insuperable,—was nothing more than a perfect hymen. I gladdened the young lady no doubt equally with her mother, by assuring them that she need be under no apprehensions on an account which seemed to have produced so much mental distress. She soon became a wife, and has since that time also become a mother. You may readily suppose that the question referred to me was one not only of extreme delicacy but of great interest to all the parties concerned; and if a wrong opinion had been given,—if this formidable barrier had been considered an adhesion of the parts, and the knife had been resorted to—a surgical operation, highly unnecessary indeed, would have been performed.

Clitoris found more frequently in the class mammalia than any other external organ.—Of all the external sexual organs in females of the class mammalia, the clitoris is found most universally and invariably. It bears in some animals so great a resemblance to the penis of the male belonging to the same species, that in the racoon, the lioness, the sea-otter, and many others, it contains a small bone. In the opossum also it possesses a bifid gland, like the penis of the same animal. The analogy between the two organs is even carried farther in the loris, a species of lemur, where the urethra, according to Daubenton, runs through the clitoris, and terminates at its anterior extremity. The clitoris is large in proportion to the size of the body in a fœtus of four or five months intra-uterine age. You see in this specimen [presenting it] it is almost as large as the penis of the male at the same period. This early development of the clitoris has given rise to the idea that women more frequently abort with a male than with a female fœtus. In this other preparation we have an instance of an excessive natural growth of this organ in a child born at the full time, which lived for many weeks, and might have grown to maturity. You observe the subject is a female, because it is partly supported by the uterus; and the clitoris is fully as large as, and bears an exact resemblance to, the penis of a male at the same age, except that the prepuce does not completely cover the glans; and although there is a sulcus at the extremity, it terminates in a *cul de sac*, and is not the entrance to the urethra. This is one species of malformation, which has given rise to the notion of hermaphrodism. The history of



A, the enlarged clitoris. B B, the labia externa. C C, the broad ligaments of the uterus.

this preparation is rather curious: the child was born and christened for a boy many years ago, in a place where they ought at least to have known the distinctive mark of the sexes,—Brownlow-street Lying-in Hospital. It was not till on dissection after death that the infant was positively found to be of the feminine gender.

The existence of true hermaphrodites among mankind was formerly so universally credited, that it will be worth while making a short digression on the subject.

Hermaphroditus was the son of Mercury and Venus, Ερμης and Αφροδιτη. While quite a youth refreshing himself by bathing in a fountain in Caria, its presiding nymph, Salamis, became enamoured of him; and failing to gain the completion of her wishes by entreaty, she had recourse

to violence, closely embraced him, and besought the gods to convert them into one body. Her prayers were heard, and from that time Hermaphroditus assumed the characteristics of both sexes. Such is the fable sung by Ovid; and this is the origin of our vernacular term; by which is meant a creature possessing the organs, and capable of performing the functions, of both sexes.

There probably exists no well authenticated history of a true hermaphrodite among the mammalia; the ancients, however, believed in such beings. The Jewish and canon laws treat of hermaphrodites; and Lord Coke writes, "every heir is male, or female, or hermaphrodite—*i. e.* both male and female."

In olden times hermaphrodites were regarded as ill omens; they were looked upon as monsters unfit to enjoy existence, and were persecuted by the most unjust and cruel laws. Thus Diodorus mentions that the Athenians and Romans formerly burned them; and from Cicero we learn that they were drowned. At a very early period of the Roman empire it was enacted, that every monstrous child should be shut up in a chest, and thrown into the sea; and Livy gives an instance where, on some doubt arising as to the sex of a newly-born infant, its birth was declared to be connected with some extraordinary natural phenomena reported to have happened in the provinces, and it was condemned to be cast into the sea, *tanquam fœdum ac turpe prodigium.*

Sir Everard Home has arranged these irregular productions into four classes:—1st, malformations in the male; 2d, malformations in the female; 3d, such males as, from the deficiency of their organs, have not the characters and properties of the male, and may be called neuter; and 4th, such as possess a real mixture of both organs; in such an imperfect degree of development, however, as to prevent the possibility of the function of either sex being performed. In one or other of these divisions may be included every case that is recorded; and we must utterly reject the many extraordinary stories related by the ancients of persons capable of connecting themselves with either sex; as well as those instances that have occurred in later times, which have gained credence only through deception. We now consider that the majority of such beings, instead of combining the powers of both male and female, are unable to exercise any sexual function whatever.

The lower we descend in the scale of nature, indeed, the more frequent become the examples of confusion of the genital organs. Thus John Hunter has clearly shewn that among black cattle, when twins are produced of different sexes, that offspring which appears the cow is really an imperfect hermaphrodite, possessing a mixture of incomplete male and female parts, incapable of breeding, and commonly termed a *free-martin.* Sir Everard Home has noticed the same confusion in a dog. Haller describes a very similar case in the kid; and fish have often been found to possess a melt on one side, and ova on the other. Some reptiles and insects are naturally hermaphrodite, and to them the power of generation is permitted; such are the echinus marinus, or sea-urchin; the leech, snails, and several worms. Lastly, all the Linnæan classes of vegetables, whose sex is known, are hermaphrodite, except the diœcia, and in part polygamia.

Nymphæ not found except in woman.—None, except woman, of the other orders of mammalia possess nymphæ; and in most of them there is merely a thin border of integuments instead of the pouting, prominent, labia pudendi of the human female.

At the next lecture we shall consider the internal organs of generation.

ON DENTITION;

WITH AN

ATTEMPT TO EXHIBIT THE OCCASIONAL PRESENCE OF CERTAIN DISEASED CONDITIONS OF THE BODY,

As connected with its Irregular States.

By Dr. Ashburner.

[Continued from page 164.]

How do the teeth of the second dentition proceed to displace those of the first dentition? Much absurdity has been published on this question. They do not displace the teeth of the first dentition. The jaws grow; they enlarge: as their volume increases, the germs of the permanent teeth continue to develop the organs they have to form. These germs are enclosed in cells in the bony substance of the jaws. Up to the age of five, six, or seven years, the jaws of a child may be said to contain two sets of *sockets.* Hunter, Blake, De la Barre, and Serres, use this expression, though it is not quite correct; for the teeth of the second dentition, though not yet perfect, are lodged in *cells* below, and a little behind, the alveolar processes of the jaw which belong to the first teeth. The cells of the second teeth occupy a curve less extensive than the alveoli of

the first, and are separated from these by a bony lamina, forming a kind of partition, which keeps the two sets of teeth quite distinct from each other.

The germs of the second set of teeth have long existed in the jaws. It has been remarked, that the germs of the first dentition are attached in the fœtus immediately to the membranous folds which at this period constitute the germs; and that those of the second dentition are suspended from it by means of a small pedicle. When the capsules of the first dentition were advancing towards their development, and were approaching the upper part of the gum, those of the second dentition appeared to retreat into the depth of the jaw, and hung to the gums by their pedicles. The pedicle, in the progress of growth, is destined to perform an important part. It becomes a fibrous canal, communicating between the alveolar margin and the cell in which the capsule is lodged: it is apparently periosteum; but whatever may be its real nature, it leads to the tooth, and becomes continuous with the external layer of the dental membrane. The first account of the anatomy of this organization appears in the 7th and 11th pages of a thesis, entitled "Dissertation sur l'Histoire des Dents, présentée et soutenue à l'Ecole de Médecine de Paris, le 31 Decembre, 1806, par C. F. De la Barre, de Lisieux." In his treatise "De la Seconde Dentition," the author calls the bony canal of this passage *iter dentis*. Serres, in 1817, laid claim to the discovery of this point of anatomy, and he gives it the title of *gubernaculum dentis* —affording an instance of the love of snatching and of appropriation which some men of science share with monkeys. Blake had described the pedicle, but he had not clearly seen the nature of it.

De la Barre tells us, that during the process of dentition, (Seconde Dentition, p. 66,) the alveoli of the replacing teeth assume the shape of almond shells, and the extremities pointing to the gums terminate in a little bony canal directed obliquely forwards, and opening by an oval orifice behind the teeth of the first dentition. This is the iter dentis, which serves as a sheath to the appendix of the dental membrane.

De la Barre has the merit of pointing out the structure of the tubal appendix of the dental sac; but when he gave the name of iter dentis to the bony canal of the maxillary cell in which the permanent tooth is contained, he should have reflected that Albinus had written on the question, "Quot dentes mutet puer, et quos?" (Annot. Academ. t. 3, c. 3,); and that he had given a very minute and accurate account of the bony canal extending to the margin of the jaw, concerning the discovery of which De la Barre and Serres would each wish to be considered as the claimant. The developing teeth of the second dentition, lodged in their separate cells, continue to become more perfect; the cells in which they are contained enlarge; the appendix of the dental membrane becomes infundibuliform; and if the progress of the tooth be normal, it continues its course in such a direction as to reach its place through the channel and the aperture formed in the jaw-bone by the modelling process of absorption around the course of the appendix of the dental membrane. But before the teeth of replacement appear, the jaw should be prepared for them by a due enlargement, and by the shedding of the milk or temporary teeth. Occasionally the jaw has not sufficiently enlarged; the teeth of the first set have not fallen out. This is an anormal state, and the two sets of teeth are in the mouth at the same time; the permanent set behind the others, according to the type of configuration in the mouth of the shark. When the norma obtains, the question is—what is the progress of change in order that the jaw shall discard its first teeth, expand, and proceed to allow a proper alignement of the second set? John Hunter says, that in the upper jaw, the "tubercle is no more than a succession of sockets for the teeth, till they are completely formed." — (P. 103.) The continued growth of the lower jaw at its posterior part, may allow of the same expression regarding the base of the coronoid process. The first manifest change in the child's mouth is here. This part elongates, and when its size is sufficient, the first permanent molaris makes its appearance, and takes its place behind the last deciduous double tooth. The child had twenty teeth. When the first four permanent molares are quite through the gums it has twenty-four teeth, and has not yet shed one tooth. At what age do the first four permanent molares cut? From my own observations, I should state the epoch to be

about six years. Soemmering says, seven or eight, (De Corp. Hum. Fabr. t. i. p. 193.) De la Barre says, five or six years, (Sec. Dent. p. 112.) Bell gives six years and a half as the time, (On the Teeth, p. 79.) I have seen these teeth through at the age of three years and a half,—undoubtedly, an instance of precocious development. I have seen the first four incisors gone before they appeared,—another anormal condition as to epoch of development.

The force of growth having its direction principally from the posterior parts forwards, an expansion of the whole maxillary arc results. The curve described by the cells in which the permanent teeth are lodged, is smaller than that of the deciduous teeth. The curve of the alveolar arc of the permanent teeth will be much larger: as growth proceeds, spaces between the deciduous teeth become remarkable; the bone for a time is looser in its texture anteriorly. The space in the upper jaw, between the two central incisors, is very striking. About six years and a half or up to seven years, some of the first teeth begin to loosen. Normally, they are the two lower incisors. The pairs of teeth that should loosen in succession, are those which have first cut through the gums. Three or four weeks after the first pair begin to loosen, they drop out. If the process of absorption goes on healthily, there is nothing left of the tooth but the crown. The root is absorbed. The means by which absorption is conducted, are precisely analogous to those first described by my friend, Professor Macartney, as occurring in the removal of the sequestra of necrosis, (see Crowther on the White Swelling, p. 183.) From the membrane lining the alveolus, a new organization sprouts, of a granular nature: it is an absorbing organ, and is applied to the root of the tooth in a longitudinal direction. Grooves may be seen in the fangs of deciduous teeth drawn after the absorbing process has commenced, evidently the result of absorptive action upon the part. The *fleshy tubercle*, described by Bourdet, (Recherches, &c. p. 52,) and the *fleshy button*, by Laforgue, as the instruments for the destruction of the roots of the deciduous teeth, are, in fact, the granulations I have noticed. (See Laforgue, l'Art du Dentiste, p. 99.) De la Barre's account of the organization and its duties is, however, a little fanciful.

The teeth, before they are submitted to absorption, are dead and extraneous bodies. How does it happen that they die?

The arterial twigs which nourish the teeth of the first dentition by a curious law that regulates this process, obliterate first under the incisor teeth. Their nourishment is gone; they die, and are then sequestra. Successively the twig of artery sent to each deciduous tooth goes in turn, until the process is complete.

It would be almost idle to discuss the question as to the absorption of the teeth, and some part of the jaws, during the transition state between the two dentitions, if some of the best works on anatomy had not continued to adhere to the obsolete views promulgated up to the time when John Hunter wrote. Van Swieten says (Comment. t. iv. p. 744,) "Fateor quod mihi longe probabilior videatur opinio, quæ statuit, dentes lacteos carere radicibus;" and though this opinion of the milk teeth being deficient in roots, had not attracted many advocates, there are not wanting persons who consider, that the first set of teeth are worn by the attrition of the second set, and so in time drop out (see Meckel, Man. d'Anat. t. iii. p. 356.) Van Swieten observes, "Ab attritu secundi dentis assurgentis hoc fieri non posse, ex dictis patuit evidenter." He has argued well against this position, especially when, in adducing the views of Bunon, he says, "præterea parva distantia observatur inter dentem primum et secundum." The teeth are, in fact, so distinctly lodged, so well separated, that they are at no time in contact. The one set are not placed immediately under the other. In some cases, when the milk teeth fall out, the succeeding teeth are yet some way distant from the place which was occupied. Perhaps there may be but a small part of the space occupied left; for the absorption of all the old parts depends upon the law of evolution, which has from the interior unfolded those parts of the jaw which now exist. It is an *evolution* attended by an absorptive and a modelling process (see Hunter on the Teeth, pp. 98, 99, 100;)—an evolution dependent upon the forces of growth exerted from the posterior parts of the jaws—forces which act with an energy, and, when the trains of growth are anormal, produce an amount of pressure against resisting forces, which are very

remarkable. When the trains of growth are normal, the current of nourishing material flows forward, and the parts in the interior of the jaws are evolved, and each takes its due station, the *pressure* from behind favouring the turning off of the deciduous structures, which are absorbed in due course. A question, that has been the source of some confusion, has been asked about the replacing teeth:—what teeth occupy the spaces previously held by the twenty teeth of the young child? Four molar teeth of the permanent set appear behind the twenty,—one behind each last molar tooth of the first set. This one is placed in each side of each jaw behind five teeth, counting from the median line. The first that drop out are incisors; next to them is a canine tooth: these are replaced in their proper turns by incisors, and by a canine tooth. Behind these are two deciduous molar teeth, to be replaced by two bicuspid teeth. These are the only replacing teeth. Those which come afterwards are altogether eight in number, two on each side in each jaw — molar teeth, appearing later in life.

Let us inquire into the epochs for the appearance of all these teeth. We have seen that the two deciduous central incisors of the lower jaw belonging to the first set, fall away about the age of seven years. The vacant spaces are soon to be occupied by a couple of incisor teeth, which cut through the gums, with edges that are serrated—an appearance that time takes away. When these teeth are half-up, the two superior central incisors fall away, and are succeeded by two much larger teeth. In consequence of the want of a perfectly normal instance of healthy growth, it is very difficult in London to fix the time when the next two incisors, the lateral of the lower jaw, should fall out. Irregularities in this respect are very numerous; for the perfect consent between the growth of the teeth and that of the jaws, is wanting. The common occurrence is, that of a pressure from deficient growth of the jaw turning the newly-arrived central incisors out of their line for a time, producing an angle at the median line, instead of a continuous arc; and their backs appear to be pressed towards each other. In most cases the jaw increases in time, and the teeth assume their proper stations. About a year is occupied in the shedding of the four central incisors, and another year in that of the four lateral incisors. The anterior bicuspid teeth of the lower, then those of the upper jaw, are next to be shed; these occupy another year. The posterior bicuspids follow, and then comes the turn of the cuspidati, or canine teeth. Very often the canine take the precedence of the posterior bicuspid. The falling out of the posterior deciduous molares and canine, and replacing by these teeth, is a process that lasts from about nine years and a half till twelve. In the meantime the jaws manifestly enlarge, particularly at the posterior part. Spaces are found behind the first permanent molares, which appeared at six years of age; and before thirteen years and a half are complete, four new molares are cut.

The individual has now completed the development of twenty-eight teeth, and is ready to encounter the further unfolding of the frame, which is implied by the changes attendant on puberty. Three or four years seem to be required for a due perfection in the growth of the organs of reproduction; and during the remainder of this septenary period, the system adds accretion to the body, while four new molar teeth are put forth, completing the full number of thirty-two teeth in the mouth. These last four, cut between seventeen and twenty-one years of age, are the wise teeth, or *dentes sapientiæ*.

A recapitulation of the order and periods of these changes may be proper.

Periods.	Teeth.
Six years . .	First four permanent molares appear.
Seven years to eight years .	Two central incisors of the lower jaw fall out, and are replaced by the two permanent central incisors. Two central incisors of the upper jaw fall out, and are succeeded by the large permanent incisors.
Eight years to nine years . .	Shedding of the lower lateral, then of the upper lateral incisors, and their replacement by permanent teeth.

Periods.	Teeth.
Nine years to ten years . .	Shedding of the first deciduous molar teeth of the lower jaw; their replacement by the first bicuspid; then of the first deciduous molar teeth of the upper jaw, and their replacement by first bicuspid teeth.
9 years and a half to 12 years	Shedding of the posterior molares of the lower jaw, or of the canine teeth, and their replacement; then those of the upper jaw, the molares being replaced by bicuspid teeth.
12 years to 13 years and a half	Cutting of the four second permanent molares.
17 years to 21 years	Cutting of the four third permanent molares, or wise teeth.

These periods are given, but not with too much confidence, as an approximation to the normal periods for the appearance of the teeth of the second dentition. My own observation has led to these results; they do not very materially differ from Bell's table (Bell on the teeth, p. 79), although they do in some respects from the periods laid down by Serres (Essai, &c. pp. 115, *et sequentes*.) It is no easy matter to establish the normal epochs; if it were, the observations I have to adduce on anormalities of dentition, and coincident states of disease in other organs of the body, would never perhaps have been made. Having given a view of the physiology of normal dentition, I propose to show that its anormal states are often coincident with diseased conditions of other parts of the body.

[To be continued.]

ON INFLAMMATION OF THE MEDULLARY MEMBRANE AFTER AMPUTATION.

By B. Phillips, Esq.

A circumstance with which hospital surgeons are familiar is, that among patients who have been subjected to amputation, performed in the continuity of long bones, a certain number of cases terminate unfavourably.

Of this number, it is easy occasionally to explain the cause of death;—it may have occurred in consequence of disease not directly connected with the amputated member, or as a consequence of phlebitis, of an invasion of erysipelas, or indeed from other causes easily explicable. There are still a certain number in which the cause of death is less manifest; and it is with the hope of contributing in some measure to the elucidation of a cause which is yet unknown, that I have written the following paper.

I am aware that my data are not sufficiently complete to enable me to attempt to enter fully into the consideration of my subject; but if I am able to set forth clearly a sufficient number of facts to induce others to extend the inquiry, no long time will elapse before we may have ample information upon an obscure point, as connected with amputation: for every day bears evidence, that the desire to cultivate pathological anatomy is becoming more universal, and, as a consequence, investigations will be more minutely conducted, and our knowledge will in proportion become, at the same time, more extensive and more accurate.

It is certainly a singular circumstance, that so many years have passed away since ample opportunities of investigating disease have been afforded to medical men, and yet that so important an affection as that upon which I am about to treat is, up to the present moment, almost, if not quite, unknown. With the exception of a few detached remarks by Reynaud, we have no recorded observation of inflammation of the medullary membrane, either idiopathic or succeeding to amputation; and the subject has been simply alluded to in some cases of fracture.

At this circumstance I feel the more surprise, when I recollect that many surgeons of eminence have referred those syphilitic pains which so frequently affect long bones to an inflammation of the medullary membrane of these bones; and yet, in spite of this conviction, opportunities of confirming its justice have been neglected.

I shall in the proper place describe a case, which, as far as one case can do so, proves that those pains which are

experienced by persons suffering from that form of syphilis, are produced by inflammation affecting the medullary apparatus of the bone, and that occasionally this affection may give birth to necrosis.

I believe I shall be able to show that one of the most serious, and not the least frequent, accidents which can occur after amputation, is acute inflammation of the medullary membrane.

The affection appears to proceed in this membrane much as it does in other tissues; but in this paper I have limited myself to a description of certain important periods of its course:—in the state of congestion, varying of course in intensity from a slight blush to a deep brown—in the state of excitation, which is accompanied by a disposition to deposit bone—in that which is accompanied by a purulent secretion—and in the state of gangrene. Each of these stages may be observed at the same time, in the same bone, as we remove farther from the focus of injury or disease.

When inflammation has proceeded to that period of its existence which is accompanied by a secretion of pus, the connexion of the membrane with the bone becomes interrupted, and necrosis is the usual consequence. The bone then acting like a foreign body upon the periosteum, this membrane becomes inflamed by contact with it; there is deposited under it a coagulable lymph, a species of reddish gelatiniform matter, which at first we can easily remove, but which soon augments in thickness and consistency, becomes cartilaginous, presents a porous or cellulous appearance; osseous points are manifested. They become more and more numerous, and ultimately occupy all the cells of the deposited matter, and the necrosed bone becomes what is termed a sequestrum. The irritation thus caused in the periosteum does not always terminate in this way; instead of a secretion of bone, we may get, as we shall presently see, a secretion of pus, and the situation of the patient then becomes much more serious.

The two earlier stages of inflammation of the medullary membrane may be observed in all cases of fracture in the human subject, or in any animals upon which we may experiment. The state in which suppuration occurs we can easily produce, by introducing a probe into the medullary canal in any animal. The state of gangrene does not often occur, but when it does it may be easily accounted for: if the tumefaction be considerable, it is a natural and necessary consequence, for the unyielding nature of the tube in which it is produced causes a strangulation, which is rapidly followed by gangrene. Indeed, this is just what will occur in any tissue in which inflammation is developed, if that tissue be firmly bound down by an unyielding aponeurosis.

If the inflammation of the medullary membrane do not proceed beyond that point where a deposition of osseous matter takes place, no evil consequences of importance ensue: the caliber of the canal is for a time lessened, but as soon as the irritation ceases, the work of reparation usually commences, and the canal is restored to its original state. The irritation is, however, very commonly propagated to the periosteum at the same time; a similar state is produced in it, and a similar deposition occurs between it and the bone; and if we examine the bone at this time, we shall discover a great increase in its thickness, which however terminates insensibly at some distance from the point where it has commenced—the distance of course varying with the case.

In the vast majority of the cases in which amputation has been performed, this thickening of the bone occurs; but to discover it we must get an opportunity of examining the stump soon after cicatrization has been completed, for after a few months the superabundant matter is absorbed, and the bone restored to its natural state.

When the inflammation in the interior of the canal proceeds no farther than this point, the periosteum is not constantly affected. It is true that in the greater number of cases which we have an opportunity of examining, this fact is observed, for these cases are usually a consequence of amputation or of fracture; and in these the irritation has been produced simultaneously in both membranes; but we may by experiment produce this state in one without exciting a like affection in the other.

I must now endeavour to shew why, when inflammation, accompanied by a purulent secretion, exists in the medullary membrane, the periosteum of a bone so often becomes affected.

When we carefully examine a long bone, after a successful injection, we see that many vessels pass from the interior

to the exterior, and that others take the opposite direction; that those which pass from the interior are much more numerous than those which pass from the exterior. We can have no better evidence of this fact than we may obtain from a fractured bone: if we examine it in some hours after the injury has been inflicted, we shall find that the nearer we approach to the medullary canal, the redder is its appearance. It is true that all the blood which gets to the medullary membrane arises from without, but it passes principally through those several nutritive foramina which are so conspicuous in long bones. It is evident, therefore, that the quantity of blood furnished to the bone by the periosteum is very much smaller than that which it derives from the medullary membrane; and that the bone, in the absence of the supply of blood which it has usually derived from the medullary membrane, becomes necrosed. Bichat, David, and Troja, in consequence of having a conviction of this fact, pertinaciously maintained that a morbid state of the medullary membrane constantly produced a necrosis of the whole thickness of the bone; and as a general principle they were right, that is, if they intended to state that this was the case when purulent matter was generated.

There are, however, cases, rare though they be, in which necrosis, succeeding to disease of the medullary membrane, does not affect the entire thickness of the bone.

The evidence of Brugnone and Pinchienati, published in 1787, goes to shew that necrosis may be limited to an internal lamina alone; and their evidence has been confirmed by Bordenave, Callisen, and Tenon, and also by some modern surgeons; but this variety is certainly extremely rare.

A destruction of the periosteum covering a portion of bone produces only an exfoliation of the external lamina, but a similar destruction of the medullary membrane occasions, except in the very rare instances to which I have alluded, a necrosis of the entire thickness of the bone; and this fact has been verified by numerous experiments. No doubt this would be an effectual means of causing the separation of a portion of bone which may project after an amputation; but I have very serious doubt whether it would be a judicious method, for it might occasion accidents which it would be beyond our power to control.

Boyer mentions a case confirmative of this fact: a thigh had been amputated, which was very long in healing; after some time, a portion of bone, three inches in length, came away. On inquiry, it was found that the surgeon who dressed it, daily sounded the wound with a probe, which penetrated into the bony canal, to assure himself of the extent of a fistulous opening, which had been produced by his own imprudence. The lesion had brought about the destruction of the medullary membrane, and consequently of the bone, in its entire thickness.

It is, I think, clear that it is not through any direct connexion between the medullary membrane and the periosteum, that their almost simultaneous affection is produced, but because the disease of the medullary membrane, when it has terminated in a secretion of pus, may cause complete necrosis, and because the bone then becomes capable, like a foreign body, of irritating the periosteum.

W. C., a shoemaker, aged thirty-two, suffered from terrible pains in the left tibia, some months after having been affected with primary syphilis.

So excessive were the pains, that it was found necessary to give him opium every hour, which, in considerable doses, was almost powerless. An incision was made along the spine of the tibia, which procured him a little relief. He was attacked by erysipelas, which affected the head and face, from the effect of which he died in thirty-nine hours.

The tibia in which the pain had been seated was examined: there was no disease of the periosteum except a little tumefaction on either side of the incision which had been made, and a very little pus at another point. Upon making a longitudinal section of the bone, it was found that disease, to a considerable extent, existed in the canal, commencing about an inch from the tuberosity, and terminating at two inches from its inferior end.

Along that portion, of about five inches, there was congestion and great thickening of the membrane, and between it and the bone, here and there, lymph, granular bodies, osseous nuclei, and small foci of pus; and wherever the pus was found, the bone looked earthy and of a dull yellowish white colour: the

medulla had acquired a great increase of density. Had the man's life been spared for another week or ten days, the examination would, I doubt not, have been still more interesting.

As it is, it may form a nucleus, around which may be rallied materials for the ground-work of a treatise on this important species of disease of bone.

A man met with an accident, which produced a compound fracture of the leg, and with so much injury to the soft parts, as to render it necessary that amputation should be performed above the knee. At the expiration of two days from the time of operation he died, in consequence of other injuries which he received at the same time. On examination after death, the medullary membrane was found much injected, and of a reddish brown colour; for the space of three inches and a half from the amputated extremity of the bone. No symptom occurred during life to induce a supposition that any thing unusual existed at this point.

Here the medullary membrane presented a distinct congestion, but without any of the other characters of inflammation.

If we examine the stumps of persons who have died of some disease, unconnected with the affection for which amputation has been performed, any time during the first month, we shall find in some portions simple congestions, in others depositions of albuminous matter, between the medullary membrane and the bone, and in others osseous nuclei interspersed through these depositions. We shall here find similar depositions under the periosteum, for a similar injury has been inflicted at the same time on each membrane. In these cases, which are frequent, the inflammation has not passed the limits of a healthy action,—merely a sufficient quantity of excitation being induced to cause a physiological phenomenon under circumstances which render the deposition a morbid one. And I know no symptom by which the disease at this stage may be marked.

A woman had her leg removed above the knee. For five or six days nothing remarkable occurred; on the application of the second dressing, it was noticed that there was a large quantity of pus; on the eleventh day there was much tumefaction, and she would scarcely allow the stump to be touched, so very painful was it; and upon the application of slight pressure, a large quantity of pus gushed out from a small aperture. On the fifteenth day the prostration was great, and it was ordered that she should take porter with small doses of opium and quinine; they produced no good effect. Diarrhœa, with stools every hour, succeeded on the sixteenth day, and on the nineteenth she died, the thigh being œdamatous, presenting a yellowish tint, pitting much under pressure, the pus from the eleventh day being so fœtid that the room was almost insupportable. Most of the viscera were in an unhealthy state, many of them containing tubercles: there were purulent collections in the lungs. To the extent of nearly three inches the medullary membrane was detached from the bone; the periosteum to a nearly similar extent; the medulla was broken down and infiltrated with pus, and the bone evidently dead. Beyond the point I have named, the medullary membrane was red, and the medulla more than usually firm; still higher, both were nearly in their natural state, though the cells were filled with an albuminous fluid. In this case there was a more advanced stage of inflammation of the medullary membrane than in the former case. No absorption of pus appeared to have taken place, but the patient died from the irritation attendant upon this stage of the disease. There were here three well-marked local symptoms—excessive tenderness and tumefaction of the amputated surface; profuse and fœtid purulent secretion, unconnected with the amputated surface; and a pitting upon pressure of the lower part of the thigh; and these symptoms have always been present in the cases I have seen at this stage of the disease.

A scrofulous lad, of seventeen, had suffered from a disease of the knee joint, accompanied by ulceration of the cartilages, and succeeded by anchylosis: the leg had been permitted to anchylose at nearly right angles with the thigh; the limb was found inconvenient, and he determined to have it removed.

Amputation was performed without the occurrence of any drawback. On the removal of the first dressings, union had taken place, except at the point where the ligatures were situated. On the eleventh day there was a very manifest tumefaction of the stump, and great sensibility was displayed when it was dressed; the next day there was a gene-

al yellowness over the body, and when he dressings were being renewed, a ittle pressure caused the escape of a arge quantity of fœtid pus, which had lso a yellowish tinge.

To these symptoms succeeded hectic ever, delirium, diarrhœa, and, on the wenty-second day, death.

On examination it was found that portions of the medulla and medullary membrane were hanging from the canal in a sphacelated state; higher up in the canal were large quantities of pus; the bone necrosed; the periosteum was separated from the bone by purulent matter; the whole of the lower part of the thigh was infiltrated; the saphena vein was inflamed, and was loaded with pus up to within half an inch of its junction with the femoral; the lungs were also infiltrated with the same substance; and to this I attribute the very fœtid character of the breath in this case.

Were this the place for doing so, I might mention a great number of cases in which operations of even a trivial character have been performed, (for the purpose of remedying either deformities or inconveniences) which have terminated fatally. Indeed, we should be backward in yielding to the importunities with which we are assailed to perform operations under such circumstances, unless some important good can be obtained by it.

I have the particulars of two other cases similar in their character and in their results to that of the woman, which I shall not mention in this place, for fear of giving too much bulk to this paper.

Now that I have described this disease at some length, I ought to point out, as briefly as possible, its symptoms, the manner in which I suppose it to be produced, and the way in which I propose to remedy it.

I know no symptom by which the existence of this disease can be detected before it has terminated in suppuration; then we have tumefaction, and excessive sensibility of the stump, usually occurring about the ninth to the eleventh day; and if we at this time make gentle pressure upon it, a considerable quantity (and quite disproportioned to the extent of the amputated surface), of purulent matter, of an extremely fœtid odour, gushes out; a pitting of the member upon pressure, and not unfrequently an icteric tint over the limb, and even over the surface of the body; great epigastric tenderness, febrile excitement, and diarrhœa, occur.

I believe the affection to be produced by the violence offered to this membrane by the saw. Would not the tearing action of the saw excite inflammation in any membrane? It is therefore important to know whether there be any method of avoiding this formidable accident. It is not suffificiently borne in mind, that the membrane is extremely sensible, and very easily inflamed. Bichat believed that the most acute pain which is experienced in amputation is produced by the action of the saw upon it. I do not think he was correct there. In amputation, the pain caused by the incision of the skin, and of the soft parts, is so intense, that the less considerable pain experienced by a lesion of the medullary membrane, which succeeds so immediately to the former, is scarcely felt. But if we suspend an operation after the section of the soft parts, to proceed with it when this first impression is to a certain extent dissipated, the sensation is acutely perceived, and piercing cries are uttered.

A very praiseworthy anxiety is felt to prevent such an action of the saw upon the periosteum, and this is right; but the action of the instrument upon this membrane would not bring about those formidable consequences with which such injuries to the medullary membrane are pregnant.

I confess I am unable at present to suggest a mode of avoiding this evil; but I have no doubt that those persons who are in the daily habit of amputating will soon provide one.

I have yet one remark to make, in treating of this important disease, though it may be less necessary in our own than in other countries.

A custom exists in many portions of the continent, of applying, very tightly, a bandage around the stump, for the purpose of preventing the retraction of the muscles, and a consequent exposure of the end of the bone.

This system exists at La Charité, in Paris; and it is a notorious fact, that the proportion of unfortunate terminations, in cases of amputation, is in that hospital very great.

It had not occurred to me to connect those two circumstances in a relation of cause and effect, until a few days ago,

when, in a conversation on this subject with Dr. Carswell, the professor of pathological anatomy in the University of London, he suggested to me the probability of those bandages producing a congestion, which would tend to excite the development of the disease I have attempted to describe.

This is an important point for consiration in practice, and should be carefully investigated.

I may again be permitted to apologise for the incomplete character of this paper: the absence of all assistance upon the subject from books, and even from men, will, however, sufficiently explain this circumstance; and as the time may be long before a single individual, otherwise occupied, could gather sufficient matter to make a complete treatise on the subject, I have preferred at once bringing the information I possess before the profession.

17, Wimpole-Street,
Oct. 28, 1833.

STRICTURES
ON
MR. GUTHRIE'S WORK ON HERNIA.

By C. Aston Key,
Surgeon to Guy's Hospital, &c. &c.

The remarks which I am about to offer on some parts of Mr. Guthrie's work on the subject of Hernia, are, I think, called for, to set him right as to the real state of our knowledge of this part of surgery, which he appears very much to have underrated. It is evident that his error has arisen from his having pursued an extraordinary, and in an author inexcusable, course, in attempting to ascertain the opinions of the authors he has had occasion to quote.

Mr. Guthrie has announced, that he takes the descriptions of the anatomy of the parts from Mr. Cooper's Surgical Dictionary, and proceeds to criticize them as if he were in full possession of the several authors' sentiments: he contents himself with the brief descriptions given in the same work, as evidence of the exact state of the science up to the period at which he commences his labours of discovery. Would it not have been a wiser course, in one desirous to promote the science of which he treats, to ascertain how far that science had previously advanced? would it not have been more judicious when about to criticize the opinions of another, first to consult his works, and make himself master of his statements and opinions, lest haply he find himself combating with a shadow of his own creating?

The novelty of the course pursued by Mr. Guthrie naturally leads one to suggest a reason which might have been the inducement to follow it. Investigation to an indolent man would imply an exertion he had rather avoid; and a man of superficial acquirements might feel a sort of consciousness, that a reference to the original works would disclose to him, that his discoveries had been anticipated, and fully described. Or, for an author, who does not scruple to gild his reputation at the expense of his contemporaries, or who is desirous of gaining a character for original discovery at any sacrifice, it might also be a convenient method. But as no motive of such a nature can be attributable to Mr. Guthrie, it is difficult to explain the reason of his not consulting the original works to which he somewhat distantly alludes.

The report made to me by two surgeons, teachers of anatomy, who attended Mr. Guthrie's lectures on hernia at the College, which circumstances unfortunately prevented me from hearing, leads to the surmise, that he has only of late directed his attention to the more minute points of the anatomy and surgery of hernia, and that, what for years has been familiar to others, may be regarded by him as new. Such at least is the account given to me by competent judges, who have been engaged in teaching the same subject, and who were surprised at hearing the ordinary anatomy of the parts, as it is taught in most of the metropolitan schools, brought forward as a novelty, and with something like an air of discovery. I am also led to understand, that the description given by Mr. Guthrie of the structure of the parts concerned in hernia, rather betrayed a want of acquaintance with the real state of our knowledge of the subject, than any great depth of investigation on his part;—that the professor was, in fact, (if I may presume to say it) rather behind than in advance of the actual state of science. This may serve to account for the statement in his commencing page, and which forms the groundwork of his book,

that "*according to the prevailing opinion of modern surgeons, the parts through which an inguinal hernia passes or proceeds have little or nothing to do with the causes of strangulation."

Such a statement coming from the pen of an English surgeon in the year 1833, cannot but strike every person as being at variance with all that has been written or taught on the subject of the stricture in hernia. In 1804, Sir Astley Cooper writes as follows, in reference to the structure of the internal ring, where a hernia emerges from the abdomen: — "†Hereby [alluding to the disposition of the muscles at the inner ring] may be explained the opinion which some surgeons have entertained of the *spasmodic* nature of the stricture,—a state which it was difficult to account for, when the seat of strangulation was supposed to be confined to the external ring, as this tendinous aperture possesses no muscular action, and cannot assume the state of spasm." Further on, when describing the means for reducing strangulated femoral hernia, he says‡, "These means [tobacco and opium, &c.] are less frequently effectual here than in the inguinal hernia, which is probably owing to two causes, namely, to the nature of the parts through which the hernia descends, and the smallness of the aperture forming the mouth of the sac. In the inguinal hernia, the parts are so connected with muscles that any relaxation brought on in these, affects the aperture through which the hernia descends; but in crural hernia, the seat of the stricture is in parts less connected with the action of the muscles, and general relaxation has but little effect on them." The mode in which muscular contraction effects the strangulation at the inner abdominal ring, is one among the many useful discoveries that Sir Astley Cooper has made in the anatomy of hernia. A reference to his work and to several of the plates plainly shews, that the curve of the transversalis tendon around the inner edge of the aperture, where it descends and spreads upon the fascia transversalis, will tend to diminish the size of the opening when that muscle is in a state of contraction.

Mr. Guthrie has certainly not cleared up the obscurity of which he complains in the description of the fascia transversalis; indeed, the subject is rendered more complicated, and I question whether any person can understand this structure from his description. He attributes the difficulty of which he complains, in part, to the minuteness with which some parts are described, which scarcely deserve notice, among which he classes the fascia transversalis.

This fascia happens not to be among the parts in which he directly lays claim to any discovery, and therefore does not seem to hold any rank of importance in his mind. But it is, in fact, the structure on which the whole of the anatomy and surgery of oblique, and direct, and crural herniæ hinge. It is by means of this structure that the abdomen is closed; it is by means of this fascia that the muscles act, to strengthen and defend the lower part of the abdomen. It is through openings in this fascia that these herniæ descend. It is by this fascia that the direct and the femoral hernia are covered after quitting the abdominal cavity. Its importance, therefore, is not inconsiderable; and it would have been as well if he had studied Sir Astley Cooper's description, instead of adding to the difficulties and discrepancies he complains of. His description is perfectly easy to follow, as it is founded on numerous and accurate dissections, and presents no difficulties, but what must arise when his descriptions are mystified, and his terms perverted. By a reference to his work, Mr. Guthrie would have discovered that the terms inner and outer portions are always used to designate the two parts of the fascia transversalis: he might also have known that his descriptive anatomy of those two portions is followed and taught by most of the anatomists of this town; and that the connexions of the fascia do not constitute so difficult a problem as Mr. Guthrie would have us believe. I do not hesitate to say, that he might have found in the best anatomical class-books of the day, a more clear, a more full, and a more correct description of the fascia transversalis, than he has himself given, in a work professing to elucidate the subject. But, unfortunately, he sees in every page but his own, discrepancies and difficulties. It might not, perhaps, have suited his views of originality to have borrowed his descriptions of it even from the discoverer and first describer of it. Imperfectly to quote, and incorrectly to conceive, the

* Page 1.
† Page 28, part I.
‡ Page 9, part II.

true meaning of an author, may afford scope for the exercise of ingenuity, and the display of originality; but Mr. Guthrie's situation in the profession, and his knowledge of what is due from one surgeon to another, precludes the possibility of supposing that such could have been his intention.

"It may appear," says Mr. Guthrie, "that I am laying claim to the discovery of the muscularity of the superior opening of the inguinal canal, after such a structure had been previously described by Sir Astley Cooper*." Whatever claim Mr. Guthrie may make to such a discovery, I apprehend that few will be found to acquiesce in its justice. That the action of the transversalis muscle in narrowing the upper abdominal aperture had been demonstrated nearly thirty years ago, is acknowledged and understood by all who had the benefit of Sir Astley Cooper's instructions, and is familiar to all who have made this part of surgical anatomy their especial study. The extracts I have made from Sir Astley's work above, sufficiently prove this; but if recent evidence be required, more complete confirmation of this point may be found in his description of the anatomy of the cremaster, in his work on the Testis. I transcribe the following description, not for the information of your readers, but for that of Mr Guthrie, who seems shy of consulting Sir Astley Cooper's works, and rather trusts to "reports" of his opinions. In Plate v. fig. 1, is a view of the muscular structure in the inguinal canal; and the explanation of the plate says, "C. C. transversalis muscle arising from Poupart's ligament, and passing around the spermatic cord at the internal ring, so that the fibres of this muscle appear behind as well as before the spermatic cord, and thus the inguinal canal is rendered a muscular canal." And he appends the following foot note:—"This is a most important provision in preventing hernia, and when hernia exists, it is often the cause and seat of stricture." In explanation of Plate vi. fig. 1, he has also the following foot note:—"Muscular fibres are always found proceeding from the transversalis muscle upon that part of the fascia transversalis which forms the posterior surface of the inguinal canal." In the text, page 36, he says, "It (the lower edge of the transversalis muscle) begins to be fixed in Poupart's ligament, almost immediately below the commencement of the internal ring, and it continues to be inserted behind the spermatic cord into Poupart's ligament, as far as the attachment of the testis. Thus the inguinal canal is endowed with muscular contraction, which, under the action of the abdominal muscles, serves to close it, to lessen the propensity to hernia. Sometimes a portion of muscle descends from the tendon of the transversalis, in the course of the linea semilunaris, to be inserted into the fascia transversalis, behind the cord, and into Poupart's ligament. It is this circular insertion of the transversalis which is the cause of stricture in inguinal hernia, in the course of the canal and nearly at the upper ring."

In the face of all this, Mr. Guthrie says, "the opinion that this opening is in many instances a muscular one, was, I believe, first advanced by myself; having always maintained that point since the year 1816, although I had not been able to give a demonstrative proof of it until the delivery of my lecture in the theatre of the College of Surgeons." Which being interpreted, means, that from the year 1816 he had entertained the opinion promulgated, or rather demonstrated, by Sir Astley Cooper in 1804—that muscular action exerted an influence on the inner abdominal aperture; but that he had not been able to demonstrate the nature of the muscular apparatus until the year 1831, being the year following the appearance of Sir Astley Cooper's work on the Testicle, in which the muscular fibres of the canal have been delineated and described.

Not, however, to disparage the labours of Mr. Guthrie, but to give him full credit for his discovery, let us see what real addition he has made to our knowledge of the anatomy of this canal, and in what he differs from Sir Astley Cooper. After a careful perusal, I believe I discover that in his dissection he makes the muscular fibres of the transversalis pass in a more circular form under the spermatic cord, and around the lower margin of the upper abdominal opening. Sir Astley Cooper describes the muscular fibres of the transversalis as having a circular disposition on the fascia transversalis. Sir A. C. describes the fibres as forming arches and passing into Poupart's ligament; so also does Mr. Guthrie. The

* Page 15.

one describes them as passing under the cord, so does the other. Sir Astley especially insists on their effect in shutting the canal, and in causing the stricture in oblique inguinal hernia. Mr. Guthrie attributes the same effect to them. In what practical or important points they differ, I profess myself wholly unable to discover. Mr. Guthrie makes use of the term "split," as if the transversalis muscle split to allow the cord to pass. I take this not to be a correct mode of describing it, since so narrow an opening as that implied by the above term would produce a compression of the cord by the muscular fibres, and varicocele would be the result. The sweep which the muscular fibres make round the cord, as described by Sir Astley, is the more correct view. Perhaps Mr. Guthrie may have found the fibres more completely circular in his dissection for the College lecture, than Sir Astley Cooper may have described them; but Mr. Guthrie observes, that in the generality of instances, such a disposition of the muscular fibres is not to be found, but that they end in a tendinous expansion inserted into Poupart's ligament. Of such extremely nice points of distinction I am but an incompetent judge: Mr. Guthrie has made the most of it.

"From the misapprehension (says Mr. G.) which has taken place, with reference to the inferier portion of the transversalis muscle, the coverings which a hernia of direct descent receives at this part, has been a matter of doubt." No "version of the anatomy" can possibly decide the question as to what coverings a direct hernia receives. It is by dissection alone—by numerous dissections of these herniæ, I ought to say—that the nature of the coverings can be ascertained. Mr. Guthrie seems to consider the varieties of description given by different authors, as leaving the question in a state of doubt: there is no doubt about the matter. It is true that the accounts given by authors vary; but this arises from the great variety found in the coverings of a direct hernia. "The statement said to be made by Sir Astley Cooper," (why not refer to his work, in the Library of the College of Surgeons, instead of trusting to report or hearsay?) "can only be correct when there is no inferior portion of muscular fibre, or of aponeurosis, to the transversalis muscle." A few dissections of this kind of hernia, or a reference to Sir A. C.'s work, would prove to Mr. Guthrie, that, in some cases, the transversalis tendon and fascia are blended and form a covering to the sac; in others, the inferior margin of the internal oblique is protruded on the fore part, and gives it a partial covering;—in some cases, the transversalis tendon and fascia are ruptured, and allow the hernia to pass through the slit. "A direct hernia does not," says Mr. Guthrie, "receive a covering from the cremaster muscle." This is not correct. A direct hernia of slow growth, often receives a covering from the cremaster on its outer side: of this we have more than one dissection in the Museum of Guy's Hospital. The only importance that attaches to the posterior layer of the fascia transversalis (as Cloquet calls it, but which is merely a dense layer of fatty membrane intervening between the true fascia transversalis and the peritoneum) is in reference to this kind of hernia; but this view of it has been altogether omitted by Mr. Guthrie: his description of it is laboured—unnecessarily so—as it has little to do with oblique inguinal hernia, and he makes no mention of it in reference to direct hernia. But in the operation on the latter, the covering which it receives from this layer of fat very often serves to distinguish a direct and an oblique hernia; the latter having no adipose structure between the cremaster and the sac.

The correctness of his description of the inguinal canal*, few, I apprehend, will be disposed to doubt. It is precisely that discovered by Sir Astley Cooper in 1804, and as since improved by his subsequent labours: it is that which is now taught in most of the schools in London. He subsequently adds, in his description of the descent of an oblique hernia, that, "†if the under edge of the opening be muscular, it will of course yield in a similar manner, and muscular fibres will then be seen, which are not, I believe, observable in its normal state." This is not clear; nor is the statement quite correct, that old hernia are beyond the control of muscular action, for the band of tendon which passes round the fore and inner part of an old and oblique hernia from the transversalis

* Page 18. † Page 19.

muscle, must enable that muscle, when in a state of contraction, to gird the neck of the sac very tightly.

In his allusions to femoral hernia, the author, on referring to Mr. S. Cooper's Surgical Dictionary, finds the accounts given by Hesselbach, Langenbeck, &c., so minute and prolix, as to be almost unintelligible to a person not already well acquainted with the subject. Can he be ignorant, that an English surgeon was the first to describe the true anatomy of the parts concerned in femoral hernia? Does he not know that it was a work on this subject which first gave lustre to the character of the English surgeon, to whom I have had occasion so often to allude? Finding these foreign authors so obscure, might he not with advantage have turned to the pages of that English author from whom the foreign descriptions are partly taken? Mr. Guthrie says, he shall only notice the descriptions most commonly received. Whence received?

In order to raise up a superstructure of his own on the subject of femoral hernia, he takes as little notice as he can well do of the anatomical descriptions of Sir Astley Cooper, and objects to the accounts of the French, as he does to the unintelligible and minute descriptions of the German anatomists. None of them are fortunate enough to find favour in his eyes. It appears, however, that his own conception of the anatomy of the parts is incomplete, and therefore cannot be expected to coincide with the received descriptions of the day. In the first place, he says * that the femoral vessels are enclosed in a sheath formed by the two layers of the fascia transversalis. By no possibility can Mr. Guthrie make the outer portion form the sheath of the vessels; it terminates abruptly at Poupart's ligament, and does not therefore descend so low as the vessels. It is the inner portion alone that descends to form the sheath; that portion which receives the attachment of the transversalis tendon. Mr. Guthrie's views of what has been done in this part of the anatomy of crural hernia are so limited, and the part is so essential to a true understanding of the matter, that I will concisely give Sir Astley Cooper's view of it, as far as the fascia transversalis is concerned.

The inner portion of the transversalis fascia having received the expanded tendon of the transversalis muscle, passes down under Poupart's ligament, and inwards to the pubes, to which it is firmly attached, by a strong narrow insertion, which appears as an inner layer of Gimbernat's ligament, but from which it may be separated by a little dissection, or in some subjects by the handle of the knife. From this narrow insertion into the pubes, it may be traced under Poupart's ligament, to which it adheres, and descends upon the thigh to form the anterior and inner part of the femoral sheath. When it passes from the pubes on the outer edge of Gimbunat's ligament, it necessarily assumes a funnel-shape, and it is at this funnel-shaped part in which the absorbents are found, and into which a femoral hernia descends. The continuity of the transversalis tendon with the transversalis fascia, and with the sheath of the femoral vessels, especially that part including the absorbents, is a most important structure in preventing a femoral descent. The aperture which allows a femoral hernia to descend is thus acted upon by the contraction of the lower fibres of the transversalis muscle, and thus this muscle not only serves to shut the upper inguinal aperture by its attachment to the transversalis fascia, but also, by means of the same structure, tends to narrow the entrance of the sheath by which a femoral hernia first escapes. Unless these parts be all dissected in connexion, a very imperfect idea must be formed of the mode in which nature endeavours to *prevent* hernia; and that should be the principal object in dissection. How she allows a hernia to descend at this part of the abdomen, can only be clearly understood by exposing the parts in this way. I will endeavour briefly to explain this.

If the fascia transversalis, the transversalis tendon, and the sheath, be exposed, and Poupart's ligament (with Gimbernat's, which is a continuation of it), be dissected away, and if the finger be thrust down from the abdomen, carrying with it the peritoneum, it will be found to enter the femoral sheath, and to push before it a dense cellular structure at the orifice of the sheath. This structure is membranous and fatty, and assists in filling up the aperture by which the absorbents enter the abdomen. A hernia, therefore, besides its peritoneal coat, receives a double covering, (varying of

* Page 30.

course in density), viz., one from the cellular elongation just alluded to, and another from the sheath itself; between these a layer of fat often intervenes, which looks like omentum, and sometimes deceives the surgeon in the operation. It is to this united structure, in which a double layer can often be traced, that Sir Astley Cooper has given the name of fascia propria.

The author does not, it appears, admit that a femoral hernia enters the femoral sheath: "*A septum," he says, "separates the artery from the vein, whilst another septum confines the vein on its inside, and separates it from the absorbents generally, and from every thing there may be in that situation, constituting all that I consider to be the true sheath of the vessels." If the sheath ends on the inner side of the vein, I would ask, what that structure is which intervenes between the septum of the vein and Gimbernat's ligament? If it be not the sheath for the absorbent vessels, what is it? It is continuous with the fore-part of the fascia that envelops the artery and vein, it is also a continuation of the fascia transversalis; and by no dissection can they be separated. The continuity of this part of the sheath with the fascia transversalis, and the peculiar funnel shape of the latter, do not seem to be known to Mr. Guthrie; and he seems not to be aware of the description which Sir A. C. has given of the insertion of the fascia transversalis into the pubes, where it begins to descend to form the fore part of the sheath.

"It is," says Mr. Guthrie, "into this concave septum, oval from side to side, (his mode of describing the part where femoral hernia descends), that the hernial sac first passes; and it is this fact has made Sir Astley Cooper say, that a hernia has protruded into the sheath of the vessels." A somewhat compendious way of setting aside Sir Astley's description. Mr. Guthrie may be assured, that it is upon no such fact that Sir Astley Cooper's opinion or statement is founded. He is not one of those anatomists who found a general view of a subject upon a single fact. Numerous have been the dissections of the natural structure, and of the femoral hernia, in all its varieties, that have led him to the just conclusion, that a femoral hernia can only make its escape from the abdomen by entering the sheath. Nor does such a statement at all lead to the conclusion, that Mr. Guthrie says it does. "* This manner of expressing it leads to the same misapprehension, in my opinion, as the French mode of describing it, as protruding into the superior opening of the crural canal." They both imply or admit of it being supposed that the hernial or peritoneal sac passes down by the side of and in direct contact with the femoral vein, which is demonstrably an error in those who so understand it. A very little attention to Sir Astley's description will enable any one to understand, that the dense membrane, protruded by the hernial sac into the sheath, must form an additional septum between the sac and the vein; and in his work he expressly states that the vein and sac are not in contact.

There are some minor points that may surprise anatomists of the present day, and that only require to be mentioned to shew their incorrectness; such as the statement, † that a femoral sac has behind it the fascia lata; ‡ that a femoral hernia is prevented from descending upon the thigh like a psoas abscess, by the vessels passing from the femoral artery to the superficial fascia; that the § stricture in femoral hernia is formed by the fascia lata. These are opinions peculiar to the author; at least they are at variance with my own observations and experience.

In offering these remarks to Mr. Guthrie, I have no motive but that of correcting his ideas as to the actual state of our knowledge of the anatomy of hernia. An author may either wilfully claim the credit of that which is due to another, or he may in ignorance suppose that what is new to him must be new to others. In common with other members of the profession, I am willing to acknowledge his talents, and his capability of improving the science. But let him render credit to whom credit is due. Had he consulted Sir Astley Cooper's pages, he would have discovered, that he had published his large work, in which, for the first time, the anatomy of inguinal and femoral hernia is described, long before the German, Italian, or French authors, whom he quotes, wrote upon the subject. It is a work of which English surgery

* Page 30.

* Page 32. † Page 32. ‡ Page 33. § Page 36.

may justly be proud, and would have fully repaid Mr. Guthrie's perusal, and perhaps have led him less to undervalue the labours of one who has done so much for the surgical anatomy of hernia.

18, St. Helen's Place,
Oct. 30, 1833.

OBSERVATIONS ON THE PATHOLOGY AND TREATMENT OF DYSENTERY.

To the Editor of the Medical Gazette.

Sir,

If you should judge the accompanying communication worthy of a place in your Gazette, I shall be obliged by the insertion of it at your earliest convenience; and should it meet your approbation, I intend to forward to you some remarks on the comparative value of quinine, bark, and arsenic, as remedies in intermittent fever.

Your obedient servant,
Al. Paterson,
Surgeon in H. C. Cd. Ship, Barrosa.

Aberdeen, Oct. 26, 1833.

The opinions which have at different times prevailed regarding the immediate cause of dysentery, have, of late years, been very generally given up; most pathologists being agreed that inflammation of the intestinal mucous membrane essentially constitutes this disease. I am, nevertheless, induced to believe that inflammation is the effect, not the cause, of disease; and that dysentery primarily consists in irritation of the intestinal nerves. In proof of this I adduce the following reasons, and refer to the success of the treatment based on them.

1st. In interitis, under every circumstance, the intestinal mucous surface is the part most frequently affected with inflammation; and yet the phenomena exhibited by this disease are altogether different from those which characterize dysentery.

2dly. The dysenteric attack is often so sudden and severe as to show that inflammation could not, in so short a time, have taken place to an extent sufficient to produce the violent results. Thus I have seen a man, while he was in the act of covering the dinner-table, and apparently in good health, instantaneously seized with all the symptoms of dysentery, in its most aggravated form. Could inflammation have here taken place in a manner so sudden, and yet to an extent sufficient to produce the phenomena?—or could it have been insidiously going on for some time previous, without having alarmed the feelings of the patient? I believe that a negative must be the answer to both questions.

3dly. The dull gnawing nature of the pain attendant on this disease—the sudden severity with which its fits come on—the quickness with which they go off, and the ease which pressure affords—point its origin to nervous, not vascular derangement.

4thly. The remote causes which produce dysentery, are, in many cases, the same as those which give rise to intermittent fever, which is a disease of the nervous system. This is not all, for the two diseases are, to a certain extent, vicarious; the one substituting itself for the other, according to particular accidents or particular states of the constitution; and it is observable that those who are seized with the one disease, escape the other; or if any man have both, it is alternately; so that when the dysentery begins the fever ceases, and when the fever is stopped the other returns: hence it appears, that although the two distempers are of a different form, yet they proceed from like causes, and are intimately related to each other.

5thly. The similarity of the phenomena produced by dysentery and by cathartics, shews that the nervous tissue is in both cases the part primarily affected. In the one case, the purgative irritates the intestinal nerves—that irritation is conveyed by them to the muscular coat of the intestines, and increases their peristaltic motion, which is the cause of the purging, &c.; in the other, a different irritant takes the place of the purgative, and occasions the same effects by like means, with this difference—that the action of the one is more temporary and less violent than that of the other. It is also to be observed, that the appearance of the dejections varies according to the nature of the irritant. If it is powerful, scybala will be found in the stools; because the fæces have been so suddenly expelled that the action of the muscular coat had not time to reduce them to a more fluid state: blood will likewise appear; because the nervous irritation has so excited the sanguiferous

vessels of the intestines, as, from the increased force of the circulation, to render them liable to dilatation, or even rupture. Inflammation will also be produced by the same cause, if its action is continued for any length of time; and the part affected by it will depend upon what nerves have more immediately suffered. If those of the liver, hepatitis will be the consequence; if those of the large intestines, inflammation of their mucous tunic, and so on: but post-obit examinations have proved, that in the majority of cases the large intestines are the viscera most diseased; and this simply arises from their being exposed, not only to the irritation produced by their own morbid secretions, but also to the accumulated effects of those of the liver, pancreas, stomach, and small intestines; as well as to the injurious effect more immediately produced upon them by the straining and tenesmus, which, in many cases, contribute mainly to keep up the irritation. It hence follows that dysentery primarily and essentially consists in irritation of the intestinal nerves, and that inflammation is the effect, not the cause, of disease.

Agreeably to this theory, our first care in the treatment of dysentery must be to allay nervous excitement; and for this purpose the most efficient remedy is opium, given to an extent commensurate to the state of excitement under which the patient is labouring. In the commencement of the disease, the tincture, on account of its diffusibility and celerity of action, is the preparation which should be preferred: the dose may vary from 3iss. to 3ij. In six or eight hours after the administration of this medicine, six grs. of powdered opium, united with grs. iij. of calomel, and gr. ss. of tartrate of antimony, are to be exhibited, and to be repeated every eight hours, as long as there remains the least propensity to evacuate. The calomel is given with a view to correct the derangement which the nervous irritation must have occasioned in the secretions of the liver, pancreas, and intestines; the antimony to restore perspiration, and excite a nauseous state of the system—the most unfavourable to inflammatory action. In no disease is rest and strict abstinence more calculated to forward the salutary effects of medicine than in dysentery; since the least motion of the body, or the reception of the smallest quantity of aliment into the stomach, is often sufficient to excite irritation, and to recal the propensity to stool, with all its accompanying symptoms. Spirits ought also to be most strictly forbidden; and even in those cases where the coldness of the extremities might seem to warrant their use, it is better to be content with the application of hot bricks, and friction with warm flannel, than run the risk of exciting, by the use of stimulants, irritation, and perhaps even inflammation. In the treatment of seamen, it is particularly necessary to attend to this, and to take every precaution to prevent them getting grog, or else our best-directed efforts will be frustrated by the clandestine use of this pernicious poison. Health to them seems to be an object of little consequence or consideration compared to a draught of their favourite beverage—the prolific cause of their degradation, wretchedness, disease, and death.

By this simple plan, and with no addition except what the urgency of any particular symptom demanded, I have been enabled to cure every case of dysentery that has come under my care in a much shorter period, and with greater ease to the patient, than could have possibly been the case if either the mercurial or the cathartic mode of treatment had been followed. Of eleven cases of dysentery which occurred on board the Barrosa, and in which the above treatment was pursued, the greatest quantity of medicine used in any one of these was five doses, and the longest period before convalescence was established, two days. And I feel assured that a like favourable result will be obtained in every case, where, from the commencement, opium is freely had recourse to, and where its healing influence is not counteracted by the injurious use of purgatives, &c. If we look at the structure of the parts concerned in dysentery, we shall see that they are admirably calculated to allow the opium to act with the greatest effect, for the innumerable lacteals and absorbents which terminate in the intestines, and which are closely interwoven with their nerves, take it up, and, as it were, apply it to the irritated nerves,—so that, in this disease, opium, in a great measure, acts as a local as well as constitutional remedy. Some have objected to the use of opium in dysentery from a belief that it has a tendency to increase inflammatory action; but I am con-

vinced that whatever can, in this disease, allay irritation, and procure respite from agony, is powerfully calculated to arrest the progress of inflammation; and I can positively assert, that the only disagreeable effects which I have ever seen large doses of opium produce, are slight mental aberration, cutaneous rashes, and retention, or rather suppression, of urine—effects of very temporary duration, demanding little attention, and in nowise to be compared with the sad consequences of a mercurial or even cathartic treatment.

MAYOR'S METHOD OF TREATING FRACTURES.

To the Editor of the Medical Gazette.

Sir,

Having read in one of your late numbers the description of a plan pursued by Mr. Grantham for treating fractures of the lower extremities by suspension, the invention of which that gentleman attributes to "Mr. Moyer, a German surgeon," I am inclined to think he is mistaken in the name, and that the person to whom he alludes is *Dr. Mayor, of Lausanne*, in Switzerland, who has made so many improvements on the plan of Dr. Sauter, of Constance, by whom fractures were first treated by suspension, that he is entitled to as much praise as the inventor himself. As I have had many opportunities of seeing Dr. Mayor treat fractures at the Lausanne Hospital according to the plan which he terms, in the work he has lately published on the subject, "*hyponarthecy*," perhaps, sir, you will allow me a small space in your valuable journal, to give a brief description of the apparatus he employs.

Hyponarthecy, as the term implies, consists of a splint placed under the limb. This splint is, in fact, a board covered with a cushion, on which the fractured limb is laid. At each corner of this board is an aperture, through which passes a cord in such a manner as to form two loops, which meeting in the centre, and about a foot above the board, are attached to a cord fixed to the ceiling or top of the bed. If extension is necessary to keep the surfaces of the fracture in apposition, a handkerchief folded like a cravat is passed round the ankle, crossed on the instep, and tied to a foot-board placed at the lower end: another handkerchief is passed round the leg below the knee in the same manner, and fixed to two rings at the sides of the board. If the fracture be not oblique, it is easily kept in place by means of a wide handkerchief, which passing over the fractured part, and under the board, is tied at the side. Should a portion of bone protrude upwards, a handkerchief folded less wide must be made to press on the protruding part, and embracing the board, be tied beneath it. If the protrusion is towards either side, one half of the handkerchief should be slipped under the limb, the other passed over it, and the ends tied to a ring placed on the side where the protrusion does not occur: thus by pressing on the protruded bone, it is readily kept in place. When the fracture occurs in the thigh, the same board is used, but with the addition of a second, which is fastened to the first by means of a hinge—thus enabling the degree of flexion of the leg on the thigh to be varied. The thigh board is fixed to the pelvis by a long handkerchief, one end of which is attached to the outer corner of the board, passes over the groin round the loins, and crossing the groin in the opposite direction, is tied to the inner corner of the thigh-board. The fractured thigh is kept in its position in the same manner as the leg, and the whole apparatus is thus so firmly joined to the body, that the patient may move about in the bed with perfect safety, or be removed to another whilst his own is being made, and on the third or fourth day he is allowed to sit up in an arm-chair.

The fracture-board, by means of sliding pieces, may be lengthened or shortened, so as to suit a child or the tallest man.

In this simple way, without the use of splints, I have seen Dr. M. treat the most serious fractures, both simple and compound, and even fractures of the neck of the femur. The result has proved that, at least in his experienced hands, splints are quite unnecessary. But suspension forms no obstacle to the use of splints: they may be continued, and the patient will feel truly grateful for the liberty he may enjoy of changing his position, instead of remaining six weeks in a motionless state.

One of the chief arguments of Dr. M. in favour of his method is, that the limb being exposed to view, the surgeon can

see how the cure proceeds, and can immediately remedy any displacement, or make such applications to the injured parts as the case may require.

Suspension might with great benefit be applied to many painful affections of the lower extremities, such as gout, rheumatism, &c. It is true, there is some little difficulty in keeping the limb warm; but this may be accomplished by separate coverings of flannel, arranged so as to inclose the limb in a little bed apart. With many excuses for thus trespassing on your liberality, I have the honour to be, sir,

Your obedient servant,
HARRIS DUNSFORD, M.D.
M. R. C. S. &c.

21, Gloucester-street, Queen-square,
October 30th, 1833.

ACCOUNT OF A REMARKABLE CASE

OF

MALFORMATION OF THE FEMALE GENITAL ORGANS.

BY M. RICORD,
Surgeon to the Hôpital des Veneriens, Paris.

I WAS consulted, about a fortnight since, by a lady 22 years of age, who wished me to examine her, because the gentleman with whom she lived accused her of giving him gonorrhœa, which she said could not be the case, for she had had nothing whatever to do with any other person. She added, that she was *not made like other women*, and therefore desired that I would examine her the more attentively.

As I am in the habit of being consulted by females relative to certain supposed deformities, which generally turn out to be nothing more than one of the nymphæ, or the carunculæ myrtiformes being somewhat larger than usual, I did not at first attach much importance to what she said. The external organs presenting nothing remarkable, I applied the speculum. The instrument passed in very easily, but I could detect nothing morbid or anormal with it; the depth, however, which it reached without touching the neck of the uterus was beginning to surprise me, when I discovered a lump of fæcal matter, which felt like the os uteri, with some grape stones, which I at first mistook for vegetations.

I now recollected what my patient said concerning her unusual structure; I immediately examined the sexual parts with the greatest care, and the following is what I made out. The external labia, the nymphæ, and the clitoris with its prepuce, were of the common size, and very well formed. The orifice of the urethra was in the usual place, and presented no irregularity. The posterior commissure and the fourchette were also normal; but between the posterior commissure of the labia and the extremity of the coccyx, no anus was to be found; where that orifice usually is, there was a brownish spot about the size of a franc-piece, irregularly radiated, with no hair, while the mons veneris and the pudenda were copiously supplied with it. The orifice of the vagina, which was at the ordinary depth, and presented no carunculæ myrtiformes, had a number of eccentric wrinkles of the mucous membrane; the part had a certain power of contraction, much less than that of the sphincter ani, but greater considerably than what the entrance of the vagina ordinarily has. Beyond this place the finger could be introduced without pain into a canal which, on account of its position and its functions, I may call a recto-vaginal one.

With the speculum, which gave the patient not the least trouble, I further discovered a mucous membrane without any rugæ; and as I advanced the instrument still further and further, to a great depth, without finding a change of tissue, I was at length stopped by fæcal matter. Introducing the finger into this passage, while a female sound was put into the bladder, nothing could be felt between them except the vesico-vaginal membranes. The touch employed in every possible way, and the speculum introduced as far as it would go, did not indicate a vestige of a womb.

When I questioned the lady relative to her various functions, she told me that she always passed her fæces by the pudenda; and she had perfect command over them: flatus, however, sometimes escaped involuntarily. It appears that when the fæcal matter reached the orifice of the vagina, the patient had a desire to go to stool; but having done so, if the finger were introduced as far as possible, it met no resistance. She always took care to use an injection after stool, and to wash herself,—by which

means she was enabled to keep herself perfectly cleanly. She never had her courses in any form; nor was there ever an appearance of blood either in her urine or her stools. The gentleman with whom she had been living for the last three years never once detected her malformation. Her first connexion was attended with no pain; there was no hymen to rupture, nor any considerable resistance at the opening of the vagina to overcome. She has sexual desires; but she says that, judging from what other women are said to feel, she thinks her passions are less strong, and more easily satisfied, than those of other females. She is of a good size, and well-formed; and her look is decidedly feminine. The breasts are well developed, and have never been subject to any changes of volume since puberty. Her voice is gentle and womanish.

I may add, as I close this short paper —the practical and moral inferences from which are sufficiently obvious— that only three days ago I had another visit from the lady; she had not been ill since, but she was now affected with a decided blennorrhagia of the urethra. There was nothing the matter with the vulva or the recto-vaginal canal*.

Oct. 22, 1833.

ON THE VESICULAR ENTOZOA, AND PARTICULARLY HYDATIDS.

To the Editor of the Medical Gazette.

Sir,

On looking into a supplement of the Lancet, published in August last, and containing Lectures on Veterinary Medicine by Mr. Youatt, I was surprised to find how imperfectly that gentleman was acquainted with the natural history and anatomy of the vesicular entozoa infesting ruminants; for, after having given a very good description of the symptoms indicating the presence of hydatids in the brain of sheep (lecture 44), he proceeds to the description of the hydatid itself, and says, they are hydatids of the cysticercus tenuicollis species (the Hydra hydatula of Linnæus.) Had Mr. Youatt consulted Lamark's * or Rudolphi's † works before he commenced his avocations of a lecturer, he could not have fallen into the error of informing his class, that the hydatid which produces the *sturdy* in the sheep, (in this country termed the *giddy*, or the affected animal *dizzy* or vertiginous), is "of the cysticercus species;" he would from either of those works have learnt, that the hydatid is not only not of that species, but really a different genus; it is, in short, the *Cœnurus cerebralis* of those authors. The *Cysticercus tenuicollis* is never met with but in the layers of the peritoneum, or pleura; even if found upon the surface of the liver, it does not penetrate into the parenchymatous structure, but is confined to the peritoneal coat.

The entozoa, and particularly the vesicular worms, have not attracted much of the attention of the zootomists of this country; and, if we may judge from the lecture above referred to, and also from a discussion that took place on the subject of hydatids, at a meeting of the Medico-Chirurgical Society last February, this branch of natural history has been much neglected by the anatomists and pathologists of the metropolis. With your leave, then, I will enter somewhat farther into the subject.

Hydatids are vesicular bodies, having, for the most part, one or more vermiculi attached, furnished with a head, armed with a crown of hooks, and possessing oscula, by which they absorb their nutriment, or when acephalous, receiving their food by absorption at their surface; they are unattached parasites, having independent vitality, and are gemmiparous. Lamark divides the order of vesicular worms into five genera,—viz. bicorne, hydatide, hydatigère, cénure, and echinocoque.

BICORNES.

"Corpus ovatum, compressum, tunica hyalina vestitum; parte anteriore cornibus duobus longis filisque asperis instructâ."

This genus has but one species, the *bristled bicorne* of Lamark; Diceras rude, of Rudolphi; Ditrachyceras rudis, of Sultzer. It inhabits the intestines of man, and has been but rarely seen.

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* Gazette des Hôpitaux.

* Histoire Naturelle des Animaux sans Vertebres, vol. iii.

† Entozoorum sive Vermium Intestinalium Historia Naturalis, vol. ii. part 2.

HYDATIS.

" Vesica externa, kistosa, ferè semper vermem solitarium fovens."

" Corpus vesiculosum ampullaceum, aquâ refertum, in collum gracile anticè attenuatum; apice osculis 4 suctoriis, et coronâ terminali uncinosâ."

This genus contains two species.

1. *Hydatis globosa;* Cysticercus tenuicollis, of Rudolphi. Inhabits the peritoneum and pleura only.

It has a subtetragonal head, a short cylindrical neck, terminating in a pyriform caudal bladder; at the anterior extremity of the head is a truncated proboscis, armed with a double row of recurved hooks; the head is also furnished with four suckers or mouths, one placed at each angle; from each mouth passes an œsophagus: they are short, and terminate in one common canal, which soon again divides into two portions, one turning towards the interior of the narrow portion of the vesicle, and adhering to it, the other continuing its course towards the centre of the vesicle, subdividing too minutely to be traced, and is lost in the fluid; the first portion is probably the origin of the minute vessels that nourish the coats of the hydatid; the last, that of the vessels depositing the fluid in the vesicle. The caudal bladder appears to be formed of two or more layers. The microscope discovers a fibrous texture; it is highly contractile, for upon placing an hydatid in warm water immediately after its removal from the animal, an undulatory motion commences, and continues for some length of time. I have examined great numbers of this species, but have never yet seen any ova or buds.

I should advise those who are desirous of studying the anatomy of hydatids to make choice of this species for dissection, as it offers the largest head for examination; but if they expect that, " when they are perfeetly dissected out, the neck is readily perceived, and the tentacula or barbs projecting from the apparent opening or mouth which forms the extremity of it," as Mr. Youatt observes, they will be much disappointed; for, in the first place, the barbs do not project from the mouth (or mouths, of which there are four,) but are placed around the proboscis; and in the next place, it commonly requires the head to be pressed out of its neck with a proper instrument (an exceedingly difficult manipulation,) before the barbs are rendered visible.

2. *Hydatis pisiformis*; Cysticercus pisiformis of Rudolphi.—This hydatid " inhabits the liver of the hare, the rabbit, and sometimes the mouse." I have at present examined it from the rabbit only: it was seated in the layers of the omentum. The head has a similar structure to that of the H. globosa, but the vesicle is much smaller, varying in size from a large pin's head to a filbert, rarely acquiring the magnitude of the latter, more usually found the bigness of a pea. When its head is protruded, the hydatid is oviform; and when the head and body are retracted, it is obcordate.

HYDATIGERA.

" Vesica externa, kistosa, ferè semper vermem solitarium fovens."

" Corpus elongatum, depressum, transversim rugosum, in vesicam caudalem, aquâ refertam et corpore breviorem, postice terminatum; apice osculis 4 suctoriis, coronâque terminali uncinosâ armato."

This genus contains three species.

1. *Hydatigera fasciolaris;* Cysticercus fasciolaris of Rudolphi.—" Inhabits the liver of the rat, mouse, and other glires. It is white, and sometimes seven inches long."

2. *Hydatigera fistularis;* Cysticercus fistularis of Rudolphi.—" Inhabits the peritoneum of the horse."

3. *Hydatigera cellulosa;* Cysticercus cellulosus of Rudolphi.—Inhabits the muscular structure in man, the ape, domestic hog, &c. Scarcely any texture in the animal body is exempt from the invasion of this parasite. An individual of this species has been twice met with in the human eye*.

CÆNURUS.

" Vesica externa, tenuis, kistosa, aquâ referta, vermiculos plurimos acervatos et adhærentes fovens."

" Corpus elongatum, depressiusculum, subrugosum, apice nodulo suctoriis 4 et coronâ uncinosa instructo terminatum."

This genus contains but one species, according to Lamark and Rudolphi.

Cœnurus cerebralis, Lamark and Rudolphi. — Inhabits the brain of sheep, and other ruminants. This hydatid I have met with as large as a goose's egg.

* See Medical Gazette, vol. xii. p. 110.

Unlike the cysticercus tenuicollis, which is called a solitary worm, from existing with *one* worm terminating in one caudal bladder, the cœnurus has *many* worms terminating in one common vesicle, and is therefore called a social worm. The worms, when protruded, are not more than two lines in length; but they are invariably found retracted, and then appear on the outer coat of the vesicle like oval tubercles, with a depression parallel to their long diameters, resembling a mouth with two labia: no part of their head is visible in this retracted state, but when unfolded, it discovers the same parts, and of a similar form, as the head of the cysticercus. The number of worms is in proportion to the size of the vesicle, the larger ones possessing more than a hundred, and they are arranged in clusters. These parasites are located in every part of the cerebral mass, and are always enclosed in a cyst, except when deposited in either of the ventricles. The cyst is constructed of condensed cellular membrane, or some other appropriate tissue formed by surrounding blood-vessels: it is organized, and *that portion of it immediately opposed to the part of the vesicle on which the clusters of worms are situated, is remarkably vascular, and lined with a dingy, yellowish, sebaceous matter.* Mr. Youatt speaks of "certain irregularities, little points, or granulated projections" "upon the outer coat of the hydatid," "by means of which the hydatid seems to be united to the cerebral substance:" these granulated projections can be no others than the retracted worms which I have described; for these animals possessing independent vitality, need no bond of direct union: I doubt very much whether they are ever really attached to their envelopes by their crown of hooks, the member best fitted for that purpose, for were those hooks *inserted* into the surrounding cyst, surely we should sometimes find them attached, or the inner surface of the cyst wounded by them; neither of which circumstances have I ever observed. The particular vascularity of that part of the cyst in contact with the vermicular portion of the hydatid indicates the presence of irritation at that spot, which leads me to believe that the economy of the armed proboscis is, by its erection, to excite the vessels of the cyst to pour forth a secretion or exhalation to serve as food for the parasite, and which is absorbed by their four little mouths. It appears probable that the mouths of the hydatid possess a power of election by which they are enabled to separate the finer from the grosser particles of the food, absorbing the former and rejecting the latter; and thus I would account for the presence of sebaceous matter invariably found in the cysts of the cœnuri, and always lining the vascular portion only. When hydatids are seated in the ventricles, we do not meet with this refuse; but the effects of irritation are visible in a gorged state of the plexus choroides—increase of the fluid of the ventricles, and an effusion of fibrin. One of the most interesting specimens of morbid anatomy I ever beheld, was a hydatid floating in the fluid of one of the lateral ventricles, enveloped in a cloud of fibrin. In regard to the muscularity of either of the coats of the caudal bladder, I think it very problematical: what need can there be for a muscular structure in that portion of the hydatid? it does not appear to possess or require locomotion; if it did, the vermiculi would be irritating every part of the interior of the cyst in its turn, and we should find its whole interior vascular, instead of one small portion only.

Many successful operations have been performed on oxen and sheep, for the removal of the hydatid from the brain; but it is the wisest plan, for obvious reasons, to slaughter the animal as soon as it is ascertained that the disease is present.

This is the only species of cœnurus noticed by authors, but I have met with another: it infests the rabbit, and I found it situated between the muscles of the loins. It is also met with in the neck and back. This hydatid grows rapidly, and multiplies prodigiously; and being seated near the surface, it soon projects, and sometimes forms a tumor of considerable magnitude. When the warrener meets with a rabbit thus affected, he punctures the tumor, squeezes out the fluid, and sends the animal to market with its brethren. I possess a specimen of this species in a pregnant state: the earliest visible state of gestation is a minute spot, more transparent than the surrounding coats of the parent; this enlarges till it projects from the parietes of the maternal vesicle; it continues to enlarge until it becomes a perfect hydatid, attached by a slender peduncle only: even whilst

small, other young are seen sprouting from it; and so on in a series of three or four. My specimen exhibits them in every stage of growth—from a minute point to a vesicle the size of a hen's egg. As I can see no difference in structure between this hydatid and the last-mentioned, I am unwilling to consider it a different species; for surely a varying locality ought not to constitute a specific character.

ECHINOCOCCUS.

"Vesica externa, kistosa, aquâ repleta, continens vermes minimos, arenulaceos, superficiei internæ adhærentes."

"Corpus, subglobosum, aut turbinatum, læve, apice suctoriis 4, et coronâ uncinosa instructo."

This genus contains three species. They are social worms, as the cænurus.

1. *Echinococcus Hominis*, Linnæus and Rudolphi. Is said, by Lamark, to inhabit the brain of man. Rudolphi says there is no good authority for believing that it has ever been found in the brain, and continues, "abdominales et quidem hepaticas potius crediderim*." I am now in attendance upon a very interesting case of abscess in the liver, discharging echinococci through an opening in the parietes of the abdomen. The hydatid agrees in every respect with the echinococcus hominis described by Rudolphi, and I can add nothing of value to what he has written respecting them.

2. *Echinococcus Simiæ*, Linnæus and Rudolphi. Inhabitant of the lungs, liver, and omentum, of apes and baboons. I question its having been found in the omentum; as far as my inquiries have extended, I have only seen the echinococci in the parenchymatous substance of the viscera.

3. *Echinococcus Veterinorum*, Linnæus and Rudolphi. "Inhabits the viscera of sheep, calves, dromedary, pig," &c.

I have examined many hydatids from the liver and lungs of sheep, and am not satisfied that I have seen the vermiculi that the echinococcus exhibits; and it appears that Rudolphi has not seen them, for he says, "In bovum et vitulorum pulmonibus sæpissime hydatides inanimatas, nunquam vero echinococcum reperi†."

By inanimate hydatids he means the acephalocysts of Laennec; which the latter considers true hydatids, but the former does not, without (in my opinion) giving good reasons for so thinking. He writes, "Hydatides sacco inclusas quales ipse in hydropici liene summopere aucto, numero fere millenario reperit, intus vesiculis granulosis aspersas, neque animalculis (echinococcis) obsitas, cl. Laennec præeunte, acephalocystides, et has quidem humanas vocat, quod forsan admitteres; si autem hydatides ipsas pro animalibus haberes, a vero aberrares, organis enim quibuscunque, proprioque motu, adeoque vita destituuntur, ut quæ in iisdem observetur motus species nonnisi a caloris additi mutatione quadam oboriatur*:" because they possess no vermicuti, or, as he expresses himself, "organis enim quibuscunque," and have no *peculiar motion*, he pronounces them destitute of life. He admits they exhibit some motion when immersed in hot water, but attributes that to change of temperature only. Why, in this case, he will not allow it to be the stimulus of heat acting upon a vital contractile function, as in the instances of the echinocoeci and cænuri, I cannot imagine: for my part, I believe them to be true hydatids, possessing independent life, as in other vesicular worms. They are found associated with the echinococci (as Rudolphi has also observed †), contained in cysts; *unattached* to those cysts are pellucid membranous vesicles, like other hydatids; in short, wanting the vermicuti only. If they be not living bodies, by what means do they increase in bulk? A few years since, I was in attendance upon a case where hundreds of these acephalocysts were expectorated from the lungs. They varied in size: some were as large as a goose's egg, others not bigger than a filbert, and probably many smaller ones escaped unnoticed. This patient has perfectly recovered her health.

Among the echinococci that I have preserved from the patient with diseased liver, I observe two acephalocysts, proving, as above stated, that they do occur together: from this circumstance, it may be argued by some that acephalocysts are but imperfectly developed

* Rudolphi, op. cit. vol. ii. pars II. p. 243.
† Ibid. p. 252. Obs. 2.

* Rudolphi, op. cit. vol. ii. Part. II. additamenta, p. 366, n. 399.
† Ibid. p. 367.

echinococci; and Rudolphi must have had some such idea (although he would not allow them independent life), for he writes thus: "Acephalocystidem suillam, quam auctor (Ludersen, page 76) habet, ad echinococcum referrem, hydatidis enim fabrica cum hac prorsus congruit, et si granulorum structuram organicam non vidit, hoc ab eorundem forsan statu minus perfecto pependit, aut inter granula non viva echinococci veri passim dispersi fuere*." But surely if they were but imperfect echinococci, they would be found of small size only, as the young of them; but I have them preserved as large as the adult echinococcus.

Had the acephalocysts been described as by Laennec, when Zeder wrote, he probably would have given a new arrangement to the vesicular worms; he having placed the cænuri and echinococci together as polycephali. It would have been but a step farther to have distributed them all among three naturally characterized genera, denominated acephalocysts, monocephalocysts, and polycephalocysts: the first comprising the acephalocysts of Laennec, the second including the genera hydatis and hydatigera of Lamark, and the last the cænurus and echinococcus of various authors.

On the "*mode of production*" of hydatids, Mr. Youatt very justly observes, "their mode of production is altogether unknown;" and inquires if, "under certain conditions of the brain, are these entozoa produced spontaneously? and if so, what are the laws and conditions of their production? Has a state of debility any influence on the production of these parasites?— and why should their appearance be confined to the very youth of the animal?" Rudolphi was an advocate for what is called "equivocal generation;" words expressive only of our ignorance. That a state of debility, or rather of cachexy, has an "influence on the production of these parasites," there is no doubt; for an impoverished condition from unwholesome food, is ever a predisposing, if not an exciting cause, of their appearing. Indeed the celebrated Jenner produced them in rabbits, by feeding the animals on food of bad quality. I have repeated his experiment with a similar result. It is said that the hydatigera cellulosa does not infest the *wild* hog; which circumstance, if a fact, presents a remarkable instance of the influence of domestication on their production; for the domestic hog occasionally abounds with them to such a degree that every organ, nay, every tisue, is penetrated by them: the pork is then called *measly*. But an unhealthy or impoverished state of the animal is not absolutely necessary to the appearance of these parasites, for the hydatis globosa is frequently observed in the abdomen of sheep in the best condition, and consequently affording wholesome mutton. It would be extending this communication to an inconvenient length if I were to enter upon the subject of their relation to morbid structure and growths; but I cannot avoid stating, that, as far as my observations have proceeded, I cannot confirm those of Dr. Baron and Mr. Fosbrooke, whose judgment, in my opinion, has been strangely warped during their inquiries. It is highly desirable that surgeons, when operating upon hydatiform tumors, should place the vesicle in hot water as early as possible after their removal, to determine whether they are true hydatids or merely hydropic cysts.

I am, sir,
Your obedient servant,
C. B. Rose.

Swaffham, Norfolk, Oct. 25, 1833.

* Ibid. p 367.

PREPARATION OF HYDROCYANIC ACID.

To the Editor of the Medical Gazette.

Sir,

I have observed, in some of the late pages of the Medical Gazette, an account of a new process for the preparation of medicinal hydrocyanic acid. The author of this process, if I mistake not, there states that he has been induced to offer it to the public from a belief that all the methods hitherto known are exceedingly imperfect, and wholly unfit to be relied upon for obtaining hydrocyanic acid in an uniform state.

With a view to lessen, in some degree, that prejudice which the author of this novel process evidently seeks to establish against every description of hydrocyanic acid now in use, and also for the purpose of cautioning the medical public against being taken by surprise by the very specious manner in which this

new remedy is introduced to their notice, and thereby probably led hastily to abandon the use of a well-known and an approved preparation for the adoption of a new and an untried one, I feel it incumbent upon me to trouble you with a very few words on the subject.

With regard to the assertion of the author, that none of the processes hitherto employed are capable of affording hydrocyanic acid in a uniform state, I would take leave to say, from an experience of fourteen years, during which period I have been in the habit of preparing this acid in considerable quantities for medical use, that I never have experienced the smallest difficulty in obtaining it of uniform strength, and in a degree of purity fully adequate to all the purposes of the medical practitioner.

The acid which I have been accustomed to furnish is a transparent colourless liquid, not at all liable to decompose or change by long keeping: it consists simply of a solution of hydrocyanic acid vapour in distilled water, and has a mean sp. gr. of 922; this corresponds to three per cent., very nearly, of true acid —*i. e.* three grains of pure anhydrous acid are contained in every 100 grains of the liquid. Two minims of this acid form the ordinary dose.

The preparation by which it is proposed to supersede the hydrocyanic acid now in use must consist, according to the author's statement, of a mixture of hydrocyanic acid with a notable proportion of alcohol, and I think also *plus*, a certain quantity of bitartrate of potash; its medium dose is said to be five minims, and also that it is more economic in use than the ordinary acid: a simple arithmetical calculation will, I believe, shew that it must be considerably less so.

What I am particularly anxious to impress upon the mind of the medical man is this—that if pure diluted hydrocyanic acid, free from the admixture of foreign substances, be the medicinal agent sought for, most assuredly this preparation does not afford it.—I have the honour to remain, sir,

Your obedient humble servant,

A. Garden.

372, Oxford street,
4th Nov. 1833.

PROGNOSIS AND TREATMENT OF PHTHISIS.

To the Editor of the Medical Gazette.

Sir,

I feel it incumbent upon me briefly to notice a letter in your last number but one, from Mr. Maclure, in which that gentleman has taken what I deem a most unwarrantable liberty with my name.

If, sir, my house were open to Mr. Maclure and his pauper patients, the least return which, in my opinion, Mr. Maclure should have made for my kindness, was to treat my free communications with the confidence in which they were made to him, and with the honour of a gentleman, and member of a liberal profession.

And if I proposed, and Mr. Maclure, in consultation, agreed to the use of a particular remedy, I deem it but justice to me, and a due deference to our joint deliberations, that that remedy should have had a full and fair trial, and not be changed, without reason, before its value and efficacy had been determined, on the mere ground of a trifling expense.

These are, indeed, minor points; and I should not have noticed Mr. Maclure's letter, had it merely detailed a breach of professional confidence and etiquette. But that letter contains a mis-statement of my opinion respecting the patient's case, which I consider it just and right to expose.

Mr. Maclure states that I declared that his patient must shortly die. Now, sir, I declared no such thing: I declared, on the contrary, that which the author of a paper published in the fifth volume of your journal, page 786, was likely to declare; viz. that I had seen the alcoholic lotion of extraordinary efficacy in checking the course of phthisis.* It appears by Mr. Maclure's own account, that I prescribed that lotion in his patient's case. Could I possibly do so without a reference, tacit or explicit, to my paper, to my experience, relative to its utility? I declared that which a physician intimately acquainted with the recent works of Laennec and M. Andral would declare—viz. that the cure in phthisis, however rare, was not an im-

* See *particularly* the case of Mr. Smith, p. 787; a case not unlike that of Mr. Maclure's patient.

possible event. But I doubtless also added that which any physician who had detected well-marked pectoriloquism, with the other symptoms of phthisis, must add—viz. that the case was one of ulcerated, tuberculous cavity, and therefore a fearful one—a most fearful one.

Did Mr. Maclure never see the works of the celebrated physicians to whose writings I have referred? Did he never read as far as the *title* of a chapter which runs thus: "La guérison de la phthisie, est elle possible?"† or thus: "Cicatrisation des excavations tuberculeuses des poumons?"‡ Or, if Mr. Maclure be acquainted with these works, can he for a moment imagine that his vague account of a patient only not yet dead, can add one jot or tittle to the full and accurate evidence upon the question before us, contained in the chapters to which I have alluded? There are two paragraphs in the work on Auscultation, to which I beg particularly to draw Mr. Maclure's attention. They occur at pp. 155 and 170 of the second volume of that extraordinary work; and, if duly studied by Mr. Maclure, they will check his ardour in the publication of cases of phthisis as cured, which are only suspended, for a time, in their course. They are as follow:—

"Assez souvent, au moment où les signes stéthoscopiques annoncent qu'une excavation tuberculeuse se vide complètement, le malade éprouve une amélioration notable, l'expectoration diminue, la fièvre tombe, et pour peu que ce mieux se prolonge, l'amaigrissement diminue même quelquefois. Cette *fausse convalescence* n'est ordinairement que de quelques jours ou quelques semaines; mais elle peut durer quelques mois, et devenir en apparence parfaite. Nous avons cité plus haut un exemple remarquable de ce genre (obs. xxiv.) Nous verrons tout-à-l'heure qu'elle se prolonge quelquefois pendant des années dans les phthisies chroniques, et *enfin*, comme nous l'avons prouvé dans l'un des articles précédens, elle peut, dans quelques cas rares, devenir parfaite, et sans aucun retour de la maladie (obs. xxv. et xxvii.)

"On peut appeler ainsi les phthisies qui, sans cesser d'être plus ou moins manifestes, durent quelquefois cinq ou six ans, et même beaucoup plus, avec des récrudescences dans lesquelles la fièvre hectique reparaît, et l'amaigrissement fait des progrès rapides, et des rémissions plus ou moins longues, et quelquefois tellement parfaites, que la fièvre, la toux, et l'expectoration, cessent tout-à-fait, et l'embonpoint même renaît. Il résulte de tous les faits que nous avons exposés ci-dessus, que cette marche de la maladie est due à des éruptions successives, et ordinairement peu abondantes, de tubercles. C'est surtout chez ces sujets que l'on trouve fréquemment des cicatrices et des fistules pulmonaires. Ce sont sans doute des cas de cette nature qui ont fait dire à Bayle que la phthisie pouvait quelquefois durer quarante ans. J'ai connu moi-même un homme qui, après avoir échappé d'une manière inespérée à une maladie dont il fut atteint à l'Ile de France en 1786, et qui présenta au plus haut degré tous les symptômes de la phthisie pulmonaire, éprouva ensuite tous les trois ou quatre ans des retours de la même affection, mais à un moindre degré."

I had good reason then, on a former occasion (for this is not the *first* time that Mr. Maclure has attempted to be wise and witty at my expense), to beg Mr. Maclure to wait and watch the case. I would still urge the same precautionary measure – still suggest that this may be but one of "fausse convalescence," so frequent in this disease.

There is a point highly worthy of remark. It seems I prescribed a seton for Mr. Maclure's patient. Could I do this out of mere wanton cruelty? No, sir; but full of fears for the issue of this poor man's case, I still wished to give him the full advantage of a last hope, and of an important remedy.

In regard to the want of frequency in the pulse, which Mr. Maclure puts into competition with the actual existence of pectoriloquism, as a prognostic, and which Mr. Maclure says he never knew to accompany phthisis proceeding to a fatal termination, I can only say, that Mr. Maclure's experience does not agree with mine, or with that of some of the most eminent members of the profession. I have, and others have, often felt the hope which a pulse of natural frequency would seem calculated to inspire, in the midst of terrific symptoms, and found that hope gradually vanish as I have

† De l'Auscultation; ed. 3, tome II. p. 58.
‡ Clinique Médicale; ed. 2, tome II. p. 381.

watched the case. Such an instance occurred in Mornington Crescent very recently: too favourable a prognosis, founded upon this very symptom, was given, which the event falsified. This caution I give to any who might be led to place implicit reliance on this ground of Mr. Maclure's prognosis. "Falacissima res" will the pulse, in this point of view, assuredly be, and bitter the reflection, that expectations have been raised which were not realized.

But I now pass on to a more pleasing occupation—viz. to that of detailing the advantages of a remedy in phthisis. This remedy is that to which I have already alluded—the alcoholic lotion. One part of alcohol is mixed with five of water, and applied by means of six folds of linen, three inches in breadth, stretched tightly across the upper part of the thorax; the patient's skin being guarded all over with one fold of flannel. I have this day received the most gratifying tidings of an interesting patient whom I some time ago visited, with Mr. Gardner, at Marlborough. Hæmoptysis and puriform expectoration, with every fearful symptom, have subsided. In *many* other cases of undoubted phthisis the symptoms have been checked—the comfort, the strength, and even the flesh restored—by this means. One patient called this lotion his "breast-plate." Some have worn it for years: a proof at once of their opinion of its efficacy, and of the tendency in this treacherous disease to return. Indeed, although I by no means wish to insinuate that the alcoholic lotion can cure a disease generally incurable (and I would not be again misunderstood—misrepresented), yet I can truly say that this remedy has, in very many instances, conferred a benefit for which I scarcely dared to hope—checking the course of the disease, and modifying, at least, the immediate *prognosis*.

It is but right to state that this remedy has been conjoined with a mild animal diet, regulated bowels, early hours, flannel over the surface, sponging with salt and water, and free exposure to the open air, when the wind has not been northerly or easterly; and that to these have been added, if possible, constant journeying, or sailing, and change of air.

I am, sir,
Your obedient servant,
MARSHALL HALL, M.D.

PRESENT STATE AND PROSPECTS OF THE MEDICAL PROFESSION.

To the Editor of the Medical Gazette.

SIR,

IN one of your late numbers there is an article on the subject of the late struggle at the General Dispensary, written with your usual vigour, in which you lay the whole blame of the defeat of the medical officers at the door of the *Lancet*. The incessant railing of that periodical against medical officials and authorities has sunk the profession in public opinion, you conceive, and diminished the confidence and respect formerly entertained by governors of charities for their professional officers to such an extent as, amongst other effects, to have indirectly occasioned the recent double injury inflicted on the medical body, by the compelled retirement of the former officers of the General Dispensary, and the adhesion of the new. Now it appears to me, with great respect for your judgment, that you attribute considerably too large a share of the disesteem and degradation which the profession labours under in England, to the agency of Mr. Wakley. O'Connell's speeches may have occasioned this or that outburst of violence in Ireland; Cobbett may, by his writings, have incited to the crime of rick-burning, some one or more poor and desperate peasants; but prædial destitution, ignorance, and consequently ferocity, have been the overflowing fountains of such lawless criminality of the agricultural population. O'Connell and Cobbett are less causes than creatures of rustic discontent and disorder; and it appears to me that the conventional immoralities, at least of the *Lancet*, have been, in like manner, less the causes of the present low estate of the medical body, than indicia, and effects of its disorganized and degraded condition. Like every other periodical, whether political or not, the *Lancet* is written for some one section of society more particularly, of which section it advocates the opinions, and represents, on the whole, the interests and feelings, and of which it may be considered, in short, the organ. Very soon after starting, the *Lancet* made its choice between the extremes, and fixed on what, in one sense, may be called the popular side—

that of the many against the few—of the poor against the prosperous—the mean against the eminent; and has accordingly waged a perpetual partizan warfare against the officials of our medical colleges, charities, and schools. On more or fewer occasions the accusations and vituperation of the *Lancet* may have been really the expression of private malice on the part of the Editor; but in general I am convinced that he has been virtually but a mouth-piece for, and interpreter of, the discontents and insurgent humours of the mass of the profession. I have several reasons for thinking so, of which let me state shortly the principal one. The profession is politically debilitated, and morally degraded, by intestine discord; and this from three great sources, or rather in three different ways. 1. Each of the three great divisions is subdivided into a governing body and commonalty. Now the former being in practical effect self-elective and irresponsible (Willcock, p. 40, *et seq.*), the latter are naturally distrustful and discontented; the consequence is, that the governors and governed have habitually regarded each other with suspicion and dislike—have each disparaged, to a greater or less extent, and vituperated the other (vide Harveian Orations, &c.)—and have cooperated in one only action, viz. the degradation of their common profession.

Another, or second way in which disunion has sprung up within, and to the detriment of the profession, is this: the natural division of the medical body, speaking only of masses, is into physicians, surgeons, and pharmaceutists, or, in the phraseology of James's charter, "pharmacopolites." Such is the organization in every civilized country, so far as I have been able to learn, the southern portion of this island, or England, alone excepted. Here a different arrangement prevails, and we have, in addition to the three classes of persons versant in medical affairs above mentioned, a fourth class, totally unlike the *officiers de santé*, or *sages femmes*, of France, and who combine all the three functions above mentioned, and constitute the bulk of the profession in active service. Now the institution of this class of persons has completely deranged the natural order of things, and the proper economy of the profession, and given rise to jealousies and heartburnings not likely soon to cease, and highly injurious to the moral, and I think also to the pecuniary interests of the profession, and more especially to those of the highest branch, viz. that of the physicians. The elevation of the old order of apothecaries, *pharmaciens*, or "pharmacopolites," into medical practitioners, has had the effect of expelling from the field of practice the mass of the physicians; this is notorious. I scarcely know a physician of even ten or a dozen years' standing whose professional practice is sufficient to enable him to live like a gentleman, independently of his private fortune. And by whom have the physicians been superseded? By gentlemen whose opportunities of acquiring professional and general learning, to look no farther back than 1815, have been a five years' service as apprentices, and two years of subsequent study of the theory and practice of medicine, including surgery and midwifery. Now praise or censure of any set of men is no part of my object; I wish merely to show as a fact, that the expulsion of the physician from private practice, and the establishment of the apothecary in his place, have diminished the respectability of the profession. 1. The confidential intercourse of non-professional persons with the medical profession, is for the most part carried on with the least learned and accomplished portion of that profession. The vast majority of respectable families, from prudential reasons, deny themselves the aid of the physician, except in alarming cases. No candid man will refuse to allow that this is a disadvantage to the profession. 2. Out of this must arise, to a greater or less extent, on the physician's side, envy and aversion to his more successful rival; and on the part of the apothecary, contempt for the physician whom he has supplanted; and on each side, therefore, a disposition to depreciate the other, and therefore a tendency to degrade their common calling. 3. From the state of comparative idleness to which the physician is thus for the first half-dozen or half-score years of his career reduced, has, I believe, arisen the almost universal practice of undertaking the laborious duties of the higher medical offices in charities of all kinds, and without stipulation as to salary or other remuneration. Now this practice cannot but degrade the profession in the eyes of a mercantile public. The dignities of the throne—of the peerage—of the bench,

udicial and episcopal—of all the highest offices, in fact, are admitted to require for their support and maintenance, n popular opinion, large pecuniary supplies. The respectability of a merchant s, at bottom, a quantity plus or minus n the ratio of his supposed wealth. Is here any large class of laborious offices which barristers or divines are expected to fill without remuneration?

To the preceding causes of degradation may be added, the jealousies and antipathies springing up between the different legally recognized sections of the body medical, each of which is alternately encroached upon and an encroacher, a victim and a spoiler. The physicians, indeed, are rather sinned against than sinning; but not so the surgeons, apothecaries, or chemists. The surgeons practise physic principally, and indeed unavoidably; they should else abjure the profession, for surgical diseases are the few, and medical the many, and surgeons are in this country several times more numerous than physicians. There were, for example (1832), nearly 1000 licentiates of the Royal College of Surgeons resident in and about London; whereas the metropolitan Licentiates and Fellows of the Royal College of Physicians together, fall short of 300. The chemists likewise have their *counter* practice, medical and surgical; the former principally. And the apothecary, the buccaneer of medicine, levies contributions on all comers alike; pharmacy, surgery, and medicine, yielding each its ample returns to his exchequer. Now success begets inevitably pride and arrogance; and the surgeon or apothecary who, after having been at comparatively little expense, whether of labour or money, in acquiring purely medical knowledge, finds himself notwithstanding enabled to establish a lucrative medical practice, is little likely to set a just value on the distinctive and peculiar skill and learning of the less fortunate physician; nor is he found, in fact, to do so. Without referring to the experience of professional society, to the hospital reports of the *Lancet*, &c. I shall content myself with referring for proof to the regulations of the Royal College of Surgeons, the only body authorized to qualify for the medical service of the army and navy. On consulting that document, we find that the studies enjoined on the future sole medical attendants on the sick of each service, whose diseases, be it remembered, even in the heat of war are principally medical, are mainly surgical; while the examinations at Surgeons' Hall are, I have abundant reason to believe, almost exclusively so. How could such subversion of order, and disregard of qualification in the distribution of professional employment, be unattended with irritation and discord? Nor is it—witness certain recent jealousies, of whose existence there can I believe be no doubt, between the two Colleges about the Cholera Board, the Vaccine Board, and other matters; but no man acquainted with the influence of circumstances on feeling and conduct will require experimental proof of the position, that such opposition of interests must beget alienation and even hostility; and of all these jealousies and bickerings, the common calling of medicine is the victim, and the noble art of healing is degraded and disgraced by the viciousness of its *public institutions*, and the private brawls, intrigues, and follies, of its professors. Medicine then is degraded, and the profession is demoralized, and there is no voice heard but that of party; and it would be, I conceive, impossible in the present state of medical politics, for any medical journal to be impartial. Thus the *Lancet* is the first fiddle of the radical party, which has for its second the *Medical and Surgical Journal;* while your own able and gentlemanly journal is, if you will allow me, more than suspected of party feeling, though of an anti radical and conservative complexion — witness the protective zeal with which, last session, you threw yourself between the affrighted apothecaries and the threatening Gael; and the energy as well as ability with which you have of late so often pleaded in the cause—" Hospital Schools of Medicine *versus* London University, and (I believe I may add) King's College."

Now these, I think, are the great causes of the small esteem we enjoy as a body. The profession is in a state of moral disorganization; each petty segment is at war with its neighbour; the government of each legal division is at war with its respective subject mass. There is no union, no public spirit, and consequently no power in the mass, or protection for, or control over, individuals. Official promotion, therefore, is effected mostly by private influences, and professional merit is but one of many, and often one of the least effective, springs of professional advancement; and no

medical office can fall vacant, however laborious the duties or degrading the conditions, that some "cheap and nasty" fellow will not step forward to occupy it. The *Lancet* then, I think it may be said, has caused more disquietude than mischief, whatever may have been its intentions; it found the profession disunited, debilitated, and degraded, and, like other literary adventurers, suited its wares to its intended customers.

Now the evils above referred to are heavy and urgent, and demand parliamentary interference; and I trust that the next session will not pass over, without either an extensive general reform, or at least such inquiries and arrangements as may be needed preparatorily to such. Towards elevating the profession the legislature can effect much, especially by removing bones of contention. A, It can reconcile the governing bodies and commonalties, by *emancipating* the latter. B, It can bring into harmony the different branches recognized by law, 1. By prescribing for the surgeon an education as liberal as that of the physician. 2. By transferring to the College of Physicians, or better, to a joint board of physicians and surgeons, the duty of licensing general practitioners; (the decrepitude and imbecility of the College of Physicians is by nothing more fully proved, than its blindness in consenting to the erection of a second college of physic in Blackfriars.) 3. By admitting to general practice in England the physicians and surgeons of Scotland and Ireland, and of course of England, and thus forcing the apothecaries, in self-defence, to bring into the market a better commodity; to give up pill-rolling and menial service, as your correspondent Mr. Solly calls it, for literature and science, and the art of healing. C, By subjecting the whole profession, pharmacy included, to the London Colleges and Hall. D, By the erection of a Court of Examiners of candidates for licenses, whether in pure medicine or surgery, or for mixed or general practice; the Court to consist of Fellows of each of the Colleges, and the examination to embrace in all cases, in addition to pure medicine and surgery, forensic medicine and midwifery. Liberality of education, and community of studies and of acquirements, would generate harmony of feeling, and union and public spirit would result. I do not contend that the legislature can do all, or that the profession has nothing in its own power; but I am convinced that our corporations, &c. will not reform themselves, and that so long as the great abuses continue, so long will our disunion and prostration. Without the emancipation of dissenters, would parliamentary reform have been possible? Without the latter as a preliminary, would subsequent extensive reforms, ecclesiastical, municipal, colonial, legal, financial, commercial, however just and expedient, have been practicable?

Medical reform, sir, has been for some time a subject of great interest for me. If communications on the subject would suit your views, as Editor of the *Gazette*, perhaps you will not object to hearing from me again.

Your very obedient,
CIVIS MEDICUS.

October 23, 1833.

[It will afford us much pleasure to hear further from our intelligent correspondent on this subject.—ED. GAZ.]

NOTICE.—*We are compelled this week to give an extra sheet, in order to avoid disappointing our Correspondents by undue delay. It will be perceived, that of forty-eight pages contained in the present Number, not fewer than forty-six consist of original matter, exclusively contributed to this journal.*

MEDICAL GAZETTE.

Saturday, November 9, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

THOUGHTS ON MEDICAL REFORM.*

THE writer of a pamphlet, recently published, with this title, is evidently a Scotchman, probably a member of the Edinburgh College of Surgeons, and apparently not very conversant with the practical details of the subject of which he treats. He is a covert partizan of the late Scotch Apothecaries' Bill, and his main object, plainly enough, is to smooth the way for a new attempt to bring that measure forward.

* Thoughts on Medical Reform. By a Retired Practitioner. London: Fellowes. 1833.

As a reformer, he is of the root and branch kind; but one of the coolest of his class. He is strongly bent on pulling down all existing medical establishments--to level them, for the mere sake of clearing the ground on which to rear a shadowy superstructure of his own. He talks of reform as if it were one of the simplest matters in the world:—we have nothing on earth to do but to abolish certain absurd and useless privileges belonging to certain corporate bodies, and that done, to set up three classes of medical persons, who shall be educated after a particular fashion, and competent to serve the purposes of the rational part of the public—for the irrational are to be allowed to run their own course headlong.

Will it be believed that the very first provision of our reformer for setting medicine on a solid and sure foundation is the discountenancing all measures for the restraint of quackery? and that the first step proposed to be taken for opening a free passage into England for those of his countrymen who are desirous to practise here as general practitioners, is to permit every one whom it so pleases to kill or cure his Majesty's lieges? "*As every one is allowed to preach the gospel who can procure hearers, so every one should have liberty to practise physic who can obtain patients.*" This, it must be confessed, is a pretty considerably broad principle—a postulate, which if once admitted, will render the question of medical reform one of very easy discussion; a proposition which, if once sanctioned, will, without further trouble, throw open the road to all aspirants.

But this is a favourite as well as a fundamental principle of the writer: even in his fourth page he tells us —"If an individual chooses to confide his health to an ignorant quack, instead of employing a well-informed physician, after the difference has been pointed out to him by public authority, *it is his own concern.* Let him have full liberty to select his *medical* adviser, as he is at liberty to select his *spiritual* guide." Now, with submission to the liberal author, it has always appeared to us, that a prime object to be attained in any medical reform, suited to the wants of the country, is the restraining of ignorant and incompetent persons from endangering the lives of the people, by undertaking to treat them medically; and that if a protection of this sort were not to be extended to the community, and to the profession, there would not be much worth contending for in the matter. True it is, that little good has resulted from all the attempts hitherto made to repress irregular practitioners by law; but are we on that account to abandon all future attempts to effect a purpose, which the very attempts themselves to accomplish shew to be so desirable? Will any one venture to tell us that the infatuation respecting St. John Long did not suffer a salutary shock by the exposure which attended his prosecutions? Than the principle which our reformer broaches, we can conceive few more fraught with mischief, if pushed to the extent to which many interested persons in society would no doubt like to see it carried. Because, it seems, whoever chooses may preach the gospel, if he only get hearers, (the truth of which assertion we shall not stop to gainsay), therefore every one who can get patients ought to be allowed to practise physic. By the same reasoning, precisely, we may argue, that every one who can find flats and dupes, should have liberty to pick their pockets; and that we have no right to maintain a police to keep a watchful eye on thieves, because if people choose to take care of themselves, and fall in with dangerous characters, it is their own affair: "if they err, they will be themselves the sufferers;" and to interfere with their choice, would be "*an infringement of individual liberty.*" Quacks being thus

put on the same footing as preachers of the gospel, and the same license given in temporal concerns as in spiritual, it is not easy to conceive where we must begin to pull in the reins: we cannot well refuse to give a certain scope to political quacks, as they deal in mere matters of speculation, and to religious quacks, for much the same reason; and then for the heyday of the Carliles, the Taylors, the Unionists, and the Repealers, as well as for the St. John Longs and the Morisons. Nor can we, on the same principle, withhold some portion of our liberality from other commonly-reputed nuisances, such as gamblers, fortune-tellers, and guides to all immorality and vice. One would have thought that a purer emanation of civil and religious liberty might have issued from the atmosphere of Holland House; but these are not the only singular notions entertained by the "retired practitioner."

His next suggestion in the cause of reform—after having proved to his own satisfaction the propriety of granting the most unrestrained toleration to quacks—is, to portion out the medical part of the community into three classes: the first of these, and the least numerous (on account of the high qualifications requisite to entitle to admission to it), should consist of those "who had studied with minuteness and care all that was known of the structure and functions of the body in health and disease, and who possessed, in addition to that knowledge, an extensive acquaintance with every branch of science that could throw light upon their own. Such men would be *equally* qualified with the others—(meaning the second class, or the general practitioners, whom he had just described as "having *sufficient* knowledge of medicine and surgery to manage ordinary complaints on ordinary occasions")—*equally* qualified for the ordinary exercise of their profession; and they would be enabled, besides, by their superior attainments and habits of reflection, to detect the origin of obscure, and direct the management of dangerous diseases, which had baffled the skill and embarrassed the judgment of common practitioners." On this class, too, he would impose the duty of supplying proper professional teachers.

The third class of practitioners contemplated by our reformer is that of "approved druggists," who shall have received an education, and obtained credentials, entitling them to compound and prepare medicines, and sell them by retail. It is in introducing to our notice the expediency of providing for such a class as this, that the author comments with some justice, but more asperity, on certain clauses in the Act of 1815. He even goes so far as to inform us, that "the public was sacrificed" by the enactment. "It was, in short," says he, "an act to serve the apothecaries and save the chemists, *without any advantage to the public*, and with injurious consequences to every surgeon and physician" (ambitious, he should have added, of becoming a general practitioner in England) "who does not submit to be examined by the members of an inferior branch of his own profession."

Now there are certain limits to which the patience of readers may carry them, without any infringement on their gravity; but we defy the gravest reader of the "Thoughts on Reform" to keep his countenance when he comes to passages like these, composed of little bursts of temper, which can owe their origin to no other assignable cause than a peevish intolerance of English apothecaries—a most curious feeling, by the way, in the mind of one who is so tolerant even of ignorant quacks. We ourselves could be highly amused with these displays, were it not that we have met with so many passages in the pamphlet containing things *to be proved*—assertions for which

not a shadow of a reason is assigned,—as, just now, where, *par parenthese*, it is assumed that the Act of 1815 was one in which the public good was compromised—that it was framed "without any advantage to the public,"—a position which, we beg leave to inform the *retired* practitioner, has by no means yet been demonstrated. If he, in his retirement, is not aware of the discussions *pro* and *con* which were maintained in the world on that point during the course of the last spring, we take the liberty of referring him to one or two of the preceding volumes of our journal. At all events, he should not imagine that any assumptions which he chooses to throw out in the course of his "thoughts," add any weight to his arguments.

The three classes of medical persons are, as we have observed, to be primarily distinguished from each other by the education which they receive; and the distinction between the first two, it is conceived, will necessarily be so great, as to make it expedient to designate the first class by a title still more lofty than Doctor. The estimate with which the author presents us in the following passage, when speaking of the swarms of graduates that continue to pour from the Scottish hives, and whose highest ambition it is to become general practitioners in England, is not less just than severe.

"It is to be lamented that the Scotch Universities have inundated the island with doctors of physic, which has been hitherto the highest designation in the medical profession. Many graduates from Scotland have been eminently qualified to sustain the rank they had acquired; but others, and it is feared a great majority of these gentlemen, are inferior to the graduates from Oxford and Cambridge, not perhaps in medical knowledge, but certainly in literary attainments, general education, and acquaintance with the collateral branches of science. As a natural consequence of this disparity, the whole body is lowered in public estimation. The coinage from the Scotch mint, though it contains many specimens of sterling value, is depreciated by the admixture of inferior pieces with the same stamp, from the same authority affixed to each. Individuals of superior talents and attainments surmount this difficulty; but a large proportion, throwing aside the diplomas they have earned, are content to take at once the station, and silently assume the more humble place, of general practitioners. This evil requires a remedy; and as it would be harsh and unjust to take from any one a title he had legally acquired, there seems no alternative but to invent some other designation than that of doctor of physic for the highest rank in the medical profession."

"Some new nomenclature," he says, in a subsequent page, "must be invented. The highest appellation in medicine has been of late bestowed with so lavish a hand by the Scotch Universities, that some change is unavoidable." What that change is to be, he leaves for the ingenuity of future reformers.

We shall not follow our author through his schemes of education, for they contain nothing new, though occasionally they provoke a smile at the awkwardness with which the *retired* reformer proceeds to meddle with details. He evidently labours hard to sketch out such a course, even for his highest class, as may enable them to dispense with *English* Universities, and degrees in arts.

Of the Royal College of Surgeons at Edinburgh the author entertains the very highest opinion. The scale of education adopted by that body is, he thinks, what ought to be made the standard in other medical schools for ascertaining the qualifications for practitioners of the second class. But the power of conferring degrees he would, if we understand him aright, have transferred from most of the corporations which at present pos-

sess it; and he would have certain boards, or other public bodies, established for the purpose, which should be competent to discharge the office of examiners, and be "composed of persons *as far removed as possible from the influence of local prejudice, or private interest.*" This, we think, is highly proper; it is, in fact, the very point for which we have been long contending, in our discussion of projected educational arrangements; but we cannot help having our misgivings of the author, when we find him in a subsequent page stating it as his serious opinion, that "It might be expedient perhaps to institute *a board of examiners in every city of the United Kingdom, where all the branches of medicine are adequately taught.* The capacity of every student would be tried *in the place where he had been educated*, without unnecessary trouble and expense, and without the apprehension of being exposed to a harassing examination, and unjust rejection, by the rival teachers of a different school. Regard to their own reputation, and *a desire to maintain the character of the school to which they belonged*(?), *would prevent any board of examiners from granting undue facilities to the ignorant and idle.*" Any thing more inconsistent, or more strongly at variance with the opinion previously given, and set forth with much parade in the outset of the pamphlet, we cannot well fancy; but this it is to undertake the advocacy of a system where there are local biases, and perhaps the suggestions of interested visitors, to mar the judgment in the performance. There are, we freely admit, many things in this little production worthy of our better opinion; but the retired practitioner must meditate further, and keep *himself* more aloof from local influences and prejudices, before he can become a thoroughly useful reformer.

CLINICAL LECTURE

ON

DISEASES OF THE TESTICLE,

Delivered at St. George's Hospital, Oct. 16, 1833,

By B. C. Brodie, Esq. F.R.S.

INFLAMMATION OF THE TESTICLE.

Gentlemen,—In the present lecture I propose to speak to you concerning the inflammatory diseases to which the testicle itself is liable.

Acute inflammation.—Acute inflammation of the glandular structure of the testicle occurs not unfrequently in consequence of a blow, or other mechanical injury. It takes place also from exposure to cold; and not unfrequently it is connected with gonorrhœa. When the disease accompanies gonorrhœa, it has been called a *hernia humoralis*—a very absurd term, but I give it to you as it is in common use. When the disease is an attendant on gonorrhœa, you generally find that the gonorrhœal discharge stops first, the testicle becoming inflamed afterwards; so that it appears as if there were a translation of the inflammation from the urethra to the testicle. Some have supposed that it occurs more frequently where injections, or cubebs, have been employed, or where some other means have been resorted to for the purpose of artificially stopping the discharge, than in other cases; but I am much inclined to doubt the correctness of this opinion. Indeed I am satisfied that I have seen it quite as often where no remedies of this kind were used, as where they had been had recourse to. The disease generally occurs not at the early, but at the latter period of gonorrhœa; sometimes without any evident cause; at other times manifestly induced by the patient taking violent exercise, or by his living too freely in other respects.

In cases of gonorrhœa, however, inflammation of the testicle seems to be sometimes independent of the translation of the inflammation, or of the suppression of the discharge from the urethra; and it must then be attributed to the extension of the inflammation along the urethra and vasa deferentia to the testicle. The late Mr. Rose, who paid a great deal of attention to this subject, believed that even in the majority of cases the testicle became affected in this manner; but I must acknowledge, that my own experience would lead me to doubt the correctness of this opinion.

Symptoms.—From whatever cause acute inflammation of the testicle arises, the symptoms are the same; and the disease is

so common, and its effects correspond so much with those of other inflammatory diseases—allowing for the difference of organization of the part—that I need not occupy your time by giving you any lengthened history of it. The patient complains of pain in the testicle. For a day or two the pain is not considerable, so that he is able to walk about as usual, though with some difficulty. Afterwards it becomes more severe, and he is compelled to be laid up. The testicle is tender to the touch, and hard and swollen. The swelling has the shape of the testicle; that is to say, it is oval. It generally begins in the epididymis, and then extends to the rest of the organ. As it increases, the patient complains of more and more inconvenience; and in many cases of a very severe sickening pain. I suppose the pain to be of this peculiar kind, because the glandular structure of the testicle is contained in the cavity of the fibrous unyielding membrane of the *tunica albuginea*, which does not readily stretch as the inflamed parts swell within—operating just as the fascia of the finger operates when inflammation takes place in the parts which are situated beneath it.

In slight cases of inflammation of the testicle, the constitution is scarcely at all disturbed; but in other cases you find a good deal of inflammatory fever, a white furred tongue, frequent pulse, and a hot skin. There are some cases in which there is a great deal of constitutional disturbance indeed, a very rapid pulse, the tongue furred, and of a brown colour. The constitution is, of course, variously affected, accordingly as there is more or less inflammation of the testicle itself, and according to the state of the patient's health previously.

In some instances, when the inflammation has subsided, the testicle is at once restored to its natural condition; in others it is more or less indurated afterwards. This induration arises from coagulated lymph, effused in consequence of the inflammation, which in the course of time becomes absorbed. The lymph is generally effused into the interstices of the glandular structure, and does not injure the functions of the testicle, so that the patient need give himself no anxiety about it. Let him wait six or twelve months, and the hardness disappears. There are a few cases, however, in which the inflammation is so severe as actually to injure some portion of the glandular structure of the testicle. I examined the body of a gentleman who had had inflammation of the testicle from a gonorrhœa twenty years before. The testicle which had been inflamed was from that time smaller than the other, and a part of it remained considerably indurated. I knew these facts previously, and I was curious to examine the state of the testicle by dissection. On making a section of it, I found that about two-thirds of the *tubuli testis* remained in their natural condition, while the remainder had become converted into a white substance, having the consistence, but not the fibrous structure of ligament.

It rarely happens that acute inflammation of the testicle ends in suppuration. I imagine that such a thing never happens, except where the disease has been much neglected in the beginning. Acute inflammation of the testicle has less disposition than most other inflammations to terminate in this manner.

Treatment. — The treatment is simple enough. The patient should wear a suspensory bandage. He should also be laid up in the horizontal posture, for the force of gravity then takes the blood out of the testicle; whereas, if he sit up, the force of gravity keeps the blood in it. Leeches should be applied to the testicle; and in some cases, where the local and constitutional symptoms are more severe than usual, it may be necessary to take blood from the arm, or from the loins, by cupping. Sometimes, as local applications, cold lotions are best, and sometimes warm fomentations. Cold lotions may be applied to the testicle when there is but little pain; but when there is severe pain, warm fomentations and poultices are preferable; and, in fact, under these last-mentioned circumstances, cold lotions will do harm rather than good. Why should warm fomentations relieve the pain when it is severe, and cold lotions aggravate it? Because the severe pain, as I have told you, arises from the unyielding membrane of the *tunica albuginea* squeezing the inflamed parts contained within it, and a cold lotion prevents this membrane becoming readily dilated; whereas warm fomentations, as they relax the skin, so they relax the *tunica albuginea* also, and cause it to make less pressure on the inflamed parts within. You use warm fomentations here just on the same principle as you would employ them for deep-seated inflammation of the eye, or for inflammation under the fascia of the finger. In addition to these remedies, the bowels should be kept open by saline purgatives; some saline medicine with antimony should be exhibited; Dover's powders, or opium in some other form, should be administered also when, as sometimes happens, a great deal of nervous irritation attends on the local disease.

When the inflammation has subsided, if there be any hardness left, surgeons are much in the habit of applying mercurial ointment and camphor to the part, on the

supposition that this will promote the absorption of the effused lymph. I cannot say whether it has this effect or not; on the whole, I doubt it. I know that lymph effused from inflammation here, like that effused from inflammation in any other parts, becomes absorbed spontaneously, and therefore the mercurial ointment, or any other treatment that is employed, is likely to obtain credit which it does not in reality deserve. If there be a hard cicatrix after a cut, you know that the hardness gradually disappears; and this in no way differs from what happens with respect to the testicle, after the inflammation has subsided.

Chronic or tubercular inflammation of the testicle.—There is another set of cases in which the testicle is inflamed, but in which the symptoms are less severe, and at the same time of longer duration; in other words, the testicle is liable to a chronic inflammation. I used formerly to give the name of *tubercular inflammation* to this chronic inflammation, because it ends in the formation of a yellow tubercle in the substance of the testicle.

The chronic or tubercular inflammation of the testicle occurs sometimes in consequence of a local injury, but much more frequently it is to be traced to something in the state of the constitution. Persons who labour under rheumatism are liable to this disease; it is, in fact, in a great number of cases a rheumatic inflammation. Persons who labour under syphilis are liable to this inflammation also. We observe it in persons who suffer from a cachectic state of the system, from whatever cause it may arise.

Now under whatever circumstances the disease takes place, the symptoms are precisely the same, and it requires exactly the same treatment.

Symptoms.—At first the patient suffers but little inconvenience. He observes one testicle to be a little tender, and afterwards a little larger than the other, and harder in certain places. It appears to be somewhat knobbed and irregular; and if you see the patient quite in the beginning of the disease, you find that the induration generally commences in the epididymis—*not always*. The pain gradually increases, yet it is never sufficiently severe to lay the patient up; he can go about his usual occupations, suffering some, but not a very great degree of inconvenience. The testicle goes on increasing in size, and becoming harder. The different knobs, or tubercles, that were perceptible in the beginning, seem to run into one another; and at last you find the testicle converted into one large, hard, uniform oval swelling.

Sometimes in this stage of the disease there is no fluid whatever in the cavity of the tunica vaginalis; at other times there is a thin layer of fluid every where, lying over the indurated testicle. In some instances you find the fluid collected in one part, and not in another.

Formerly such an enlarged and indurated testicle as I have now endeavoured to describe, was confounded with other affections quite of a different nature, under the general appellation of sarcocele. When there was fluid in the *tunica vaginalis*, the case was called one of *hydro-sarcocele*. I mention these appellations, not because they are good ones, not because I use them myself, or recommend you to use them, but merely because they have been a good deal employed by surgeons; and I wish you to understand what such expressions mean when you meet with them in surgical books.

Appearances presented on dissection.—Before I proceed farther with the history of the symptoms of the disease, I will explain what may be observed in this stage of it on dissection. First, you will find in the glandular structure of the testicle a quantity of yellow unorganized matter, collected in small masses. You will see what I mean represented in this drawing [presenting it.] In a more advanced stage, you find this yellow matter collected in larger masses in certain parts of the testicle, as represented in this drawing [presenting a second;] while in other parts the glandular structure retains its natural appearances. Here it is still of a soft consistence. In a still more advanced stage of the disease, the yellow deposit has assumed a different appearance, as here shown [exhibiting a third drawing.] It is now of a firm structure, collected in distinct hard masses. On a careful examination you find it to be unorganized, and generally more or less laminated; in this stage of the disease it has been called *the yellow tubercle of the testicle*. There are preparations on the table which exhibit all the appearances which I have mentioned.

It becomes a curious question by which particular structure this yellow substance is secreted: whether it be by the tunica albuginea, by the fibres that go across from one side of that tunic to the other, or by the outer or inner surface of the *tubuli testis*. I believe it to have this last-mentioned origin. The *tubuli testis* are on so small a scale, however, that we can have no decisive demonstration of the fact as it regards them. But the epididymis is on a larger scale; and if in one of these cases, where there is this deposition of yellow unorganized substance in the body of the testicle, you slit open the canal of the epi-

lidymis, you will find some of this same yellow substance adhering to its inner surface, having been manifestly secreted by the lining membrane; and as the epididymis, after all, is only the termination of the *tubuli testis*, we may conclude that in the *tubuli testis* the yellow substance has the same origin.

Protrusion of a fungus. — Let us now suppose that the disease goes on further. The testicle become adherent to the skin at one part, and here the skin inflames and ulcerates; and then there pushes out, through the ulcerated opening, a fungus of small size at first, but gradually becoming larger afterwards, and on the surface of this fungus you find some of the same yellow substance which you find in the interior of the testicle. Here [exhibiting a drawing] is the appearance of the fungus, and there are also preparations on the table shewing it in different stages of its formation.

This, which we call a fungus, is not, however, a fungus in reality: it is the glandular structure of the testicle itself. It is formed exactly in the same manner as what is called a *hernia cerebri*; which, as you may recollect, arises from the dura mater ulcerating, and the brain protruding through the opening which is thus formed in its investing membrane.

If you dissect the parts in this stage of the disease, you will find not only that the skin has ulcerated, but that the *tunica vaginalis* and the *tunica albuginea* have ulcerated also; and that the glandular structure of the testicle projects through all these openings. You may ascertain the same thing in the living person; for when the fungus is large, no portion of the testicle remains within the scrotum, and you may distinctly trace the spermatic cord into the centre of the fungus.

There are a few cases in which an abscess forms in the substance of the testicle, and bursts externally, without the protrusion of a fungus: but these are comparatively rare. The inner surface of such an abscess secretes the yellow substance which I have described, and you will find large masses of it, with a laminated structure, coming out of the cavity of the abscess. You pull out a quantity one day, and then another day you find as much of it as before; you draw that out also, but the formation of it continues, just in the same manner as chalky matter goes on, being secreted from the inner surface of a gouty abscess of the foot.

The disease, if it be arrested in the early stage, leaves the testicle, with the glandular structure not at all impaired: if it be arrested after it has advanced some way, the glandular structure is partially dstroyed; but if it be allowed to run its course, the whole of the glandular structure disappears; and you find, in lieu of it, a new formed white organized substance, such as I before described as occurring after a severe acute inflammation of the testicle—having the consistence of ligament, but without its fibrous character.

Supposing that the glandular structure of the testicle is completely destroyed by this disease, what happens then? The parts become gradually absorbed; the indurated testicle becomes smaller and smaller, and at last there is nothing but the slender remains of the spermatic cord leading down into a tubercle which was the testicle, but is now a testicle no longer, and perhaps no larger than the end of your little finger. Here is a testicle [presenting a preparation] where the process of absorption is going on; it is much reduced in size, but I have seen the testicle much smaller than this in many cases. In the early stage of the disease the testicle is enlarged to many times its natural size; then, when the disease has run its course, the large testicle disappears, and you find nothing but a knob or kernel in its place.

I remember the time when, in the early stage of this disease, it used to be confounded, as I have already mentioned, with others, quite of a different nature, under the general appellation of *sarcocele*. Very often it was called *scirrhous testicle*; and when a fungus had protruded, it was even said that the patient had cancer of the testicle. Over and over again, when I first entered the profession, I have seen testicles affected in this manner removed by operation. Castration was then a common operation: it is comparatively rare at present. The difference is to be referred chiefly to the improved method of treating the disease which is at present under our consideration.

Treatment.—This disease is not to be combatted by the usual remedies for inflammation—that is to say, by leeches, fomentations, and purgatives. I will not say that they are of no use, for leeches will sometimes help you on a little, but they will not *cure* the disease. There is, however, a remedy which *will* cure it, namely, mercury. This disease occurs just under the same circumstances with inflammation of the iris, for which mercury is almost a specific; and so it is for this disease of the testicle. You must give the patient mercury, make his gums sore, and as soon as the system is affected by the remedy the pain and tenderness subside, and the swelling begins to be diminished. If you employ mercury when the disease has not been go-

ing on more than two or three months, you will generally be able to restore the testiele to a healthy condition; but if you are consulted at a later period, so much eannot be aecomplished. The mereury will only stop the inflammation that exists; it will not restore parts which have had their strueture already destroyed to their original state. Mercury, then, employed at this later period, will relieve the pain and tenderness, and diminish the swelling; but some induration, some enlargement of the testicle, will remain, over which the mercury will have no dominion. I generally give two grains of calomel and half a grain of opium twiee a day to adult persons; and then, when the gums become affected, I lessen the quantity, or give blue pill or some other milder preparation instead: or, in eases in whieh mereury disagrees with the stomach, or for other reasons, the patient cannot take it internally, you may make him rub in mercurial ointment on the thigh. Sometimes we make the patient apply the ointment to the serotum, but I do not believe that the local application of it to the scrotum does more good than rubbing it into the arm or thigh, or any where elsc; or rather it does less good, on aceount of there being a smaller absorbing surface. It does not act locally through the scrotum, but by passing through the scrotum into the general system. Sometimes you will find it best to give the mercury in one way and sometimes in another. If the disease exist in combination with other symptoms—if the patient have an eruption on the skin, have uleers on the skin, or any other symptom connected with the disease of the testicle—you will somotimes find it of advantage to give the mercury in the form of oxymuriate, combined with sarsaparilla; but in most eases the mercury is alone sufficient, and the exhibition of sarsaparilla is unnccessary.

The time during which the patient is to take mercury must vary in different cases: sometimes he will have to take it for a month, sometimes six or eight weeks, and sometimes only three weeks; according to eireumstanecs.

What is to be done in those cascs in which there is a protrusion of a fungus? This fungus has, in the first instance, a very foul surface, and a very unhealthy appearanee, and yet the parts are easily restored to a healthy state. I have heard it recommended that you should take a broad scalpel and slice off the fungus; but if you do so, and then examine it, you find the *tubuli testis* in it, so that you have, in fact, sliced off a portion of the testicle. Such an operation is to be avoided, and it is, indeed, always unnecessary. You may always cure the patient, where there is this fungus, in the following manner:—Let him be kept in bed, in the horizontal posture; give him mercury internally; sprinkle the surface of the fungus every day with very finely powdered and levigated nitric oxyde of mereury, and over this apply some simple dressing. What with the applieation of the nitric-oxyde of mercury to the part, and what with the mercury administered internally or by inunction, in the eourse of a short time, you find the surface of the fungus become covered with red healthy granulations. This drawing represents these appearanees very accurately. It was taken from a patient who had been treated in this manner. As soon as the surfaee is covered with granulations, you may leave off the application of the nitric-oxyde of mereury, and use, as a dressing, a weak solution of sulphate of copper in eamphor mixture. A grain of the former may be dissolved in an ounee of the latter, and a piece of lint dipped in it may be laid on the fungus and changed night and morning; a little simple dressing being applied over the whole, merely to keep the parts moist. Under this treatment you will find the skin gradually drawn over the surface of the fungus, while the latter gradually recedes within the scrotum, until at last the fungus, or rather the testicle (for testiele it is), becomes entirely eovered by the scrotum, and the external sore is eicatrized.

I have told you, that in some eases this species of disease is eomplicated with an effusion of fluid into the *tunica vaginalis*. Under the influenee of mercury it generally happens that the fluid becomes absorbed; so that the same remedies which eure the disease of the testicle eure the hydrocele which accompanies it. There are cases, however, in which the hydrocele attains a large size, and in which the remedies that cure the testicle are not equal to the eure of this secondary disease. Under these circumstances you should treat the disease of the testicle first by the exhibition of mereury; and after a mercurial course, but not till then, you may injeet the hydrocele. What would happen if you were to make an error in the diagnosis—if you were to mistake a hydrocele of this kind for a eommon hydrocele, and inject it before you had cured the primary disease? I did, in one instance, make this mistake, and I will tell you the result. A gentleman (a West Indian), many years ago, consulted me about a hydroeele. There was a considerable collection of fluid—perhaps about eight ounces. I found the testicle somewhat indurated, which I thought was merely from a thickening of the *tunica vaginalis*. I did not therefore hesitate to inject the hydroecle. After the operation

there followed no violent inflammation, but it did not subside as usual, and a small abscess formed in one part of the testicle, which I opened. After this several abscesses formed in succession in the testicle, which all the while went on growing larger and larger. Now I began to see the error of which I had been guilty, and to suspect that the patient laboured under a chronic inflammation of the testicle, the hydrocele being merely a secondary affection. I put the patient under the influence of mercury, and on the moment that it acted on the gums the abscesses ceased to form, the testicle rapidly became reduced, and in about another month there was an end both of the disease in the testicle and of the hydrocele; so that, in fact, every thing turned out as well as if I had adopted the proper mode of treatment in the first instance.

I may mention as a mere matter of history, that, in former times, it used to be supposed that mercurial ointment would cure some kinds of sarcocele. It was also known that there were venereal affections of the testicle, which mercury would cure. But in the great majority of such cases as I am now describing, mercury was not exhibited, and the surgeon's knife was regarded as the only remedy. About the year 1809, the patient from whom this preparation [presenting it] was taken, came into the hospital for an enlarged testicle. It did not yield to the remedies employed, and by and by this fungus protruded. There was then a consultation on the case, the result of which was that I amputated the testicle. Soon afterwards the man was re-admitted, with the other testicle affected just as this had been in the first instance. I thought it hard that the man should lose both his testicles, and I considered what could be done to prevent it. I put the patient under the influence of mercury, and he immediately got well. Since that time we have always used mercury in this hospital in these cases, and I believe that it is used in the same manner in the other hospitals of this metropolis. I do not say that other surgeons adopted it from us, but within the last twenty or thirty years we have all become better acquainted with the remedial effects of mercury than we were before; and it is probable, that when we began to use it here, other surgeons, without any communication with us, might have begun to employ it in other places. In fact, the course of events was leading us to the employment of mercury in a number of cases, in which it was never employed formerly.

LONDON MEDICAL SOCIETY.

RESOLUTIONS IN FAVOUR OF THE LATE MEDICAL OFFICERS OF THE GENERAL DISPENSARY.

At a general meeting of the Society, held on Monday, the 4th of November instant, William Kingdon, Esq, President, in the Chair, the following resolutions were unanimously adopted:—

1st. Moved by Dr. Waller, and seconded by Dr. Williams—

That, in the opinion of this Society, the regulations recently recommended by the committee and adopted by the subscribers of the General Dispensary, Aldersgate-Street, by which the medical appointments are offered to the competition of the richest instead of the most talented candidate, is injurious to the interests of the poor, the respectability of the profession, and utterly subversive of the object for which such institutions were founded.

2d. Moved by Dr. Uwins, and seconded by Mr. Dendy—

That Drs. Birkbeck, Clutterbuck, Lambe, and Roberts, and Messrs. Salmon and Coulson, are highly deserving the thanks of this Society, for the spirited and praiseworthy manner in which they have stepped forward to oppose the making public medical appointments matters of bargain and sale, and for resigning their offices when they could no longer hold them without compromising their professional honour and independence.

3d. Moved by Dr. Shearman, and seconded by Mr. Drysdale—

That the cordial thanks of this Society be given to H. R. H. the Duke of Sussex, for the zeal he has on all occasions manifested, in patronizing measures calculated to advance the interests of science and to alleviate the sufferings of the distressed; and particularly for the countenance and support he so promptly afforded to the late medical officers of the Aldergate-street Dispensary, in their endeavours to uphold the dignity of the profession and to promote the welfare of the sick poor.

4th. Moved by Dr. Ryan, and seconded by Dr. James Johnson—

That the Fellows of this Society exceedingly regret that any of their medical brethren should have so far forgotten the dignity of the profession to which they belong, and their own self respect, as to have allowed themselves to be nominated and appointed to the vacant offices, trammelled as they now are by such an obnoxious regulation.

5th. Moved by Mr. Proctor, and seconded by Mr. Cox—

That the foregoing resolutions be published in the Times, Morning Chronicle,

and Globe newspapers, in the Lancet, Medical Gazette, and Medical and Surgical Journal; that copies of the Votes of Thanks, signed by the President on behalf of the Society, be transmitted to H. R. H. the Duke of Sussex, and to each of the late medical officers of Adersgate-street Dispensary.

EDW. HEADLAND, H. P. ROBARTS, } *Secretaries.*

WIGAN ADDRESS.

TO THE LATE MEDICAL OFFICERS OF THE GENERAL DISPENSARY, ALDERSGATE-STREET, LONDON.

GENTLEMEN,

WE, the undersigned medical practitioners, of Wigan, in the county of Lancaster, present our congratulations to you on the admiration already expressed from several quarters, for the conduct you have pursued in resigning your offices, as physicians and surgeons to the General Dispensary, in Aldersgate-street; and *we* now respectfully tender our meed of praise for the determination you have evinced (an example worthy of imitation) to uphold the dignity and independence of the profession—to obtain for merit fair opportunities of distinction and reward—and to resist the undue influence of money in the election of medical officers to public charities.

Whilst we deeply deplore that the efficiency of so valuable an institution as the General Dispensary should be impaired by any collision between the subscribers and the medical officers, we would decidedly deprecate the introduction of such a rule (so unjust in principle and pernicious in tendency) into the government of any public charity, as that which has induced you to resign: and we much regret that *four* individuals should have been found in the medical profession so destitute of honour, and so regardless of the opinion of its members, as to accept the degraded offices you have so nobly abandoned.

We have the honour to be, Gentlemen, with great respect, your obedient servants,

JAMES STUART, M.D.,
And fourteen others.

Wigan, Nov. 1, 1833.

*** Any future addresses or resolutions on this subject must be transmitted to our publishers, for the wrapper.—ED. GAZ.

THE LATE DR. LATTA.

WE regret to announce the death of Dr. Thomas Latta, of Leith, which took place on the 19th ult. Dr. Latta was favourably known to the profession by the boldness and resolution with which he introduced and practised the injection of saline solutions into the veins in malignant cholera. In the populous town where he resided, his acquirements and skill had enabled him, at an early period of life, to secure a large share of public favour, the fruits of which he was just beginning to enjoy, when he was cut off by pulmonary disease, induced, to all appearance, by his laborious exertions in professional duty. Dr. Latta was gifted with a very active intellect, and, added to extensive medical attainments, an acquaintance with various departments of science, and considerable practical proficiency in the fine arts. Animated by true Christian principle, he seemed to think no fatigue too great for him to submit to, no exertion too severe, in his endeavours to alleviate human suffering. It may be truly said, that he tasked his powers to the utmost, in his labours for the benefit of the victims of cholera. His death is deeply lamented by all classes of the community, of which he was so bright an ornament; and by none more than by his professional brethren, to whom he was endeared by his kindness, candour, and amenity of manners, and by whom he was honoured on account of his intelligence, ingenuity, and zeal.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Nov.* 5, 1833.

Abscess	2	Heart, diseased	3
Age and Debility	33	Hernia	1
Apoplexy	6	Hooping-Cough	5
Asthma	12	Inflammation	21
Cancer	2	Bowels & Stomach	3
Cholera	1	Lungs and Pleura	9
Consumption	56	Jaundice	1
Convulsions	14	Liver, diseased	5
Croup	2	Measles	12
Dentition or Teething	5	Mortification	6
Diarrhœa	2	Paralysis	3
Dropsy	5	Small-Pox	6
Dropsy on the Brain	8	Sore Throat and Quinsey	2
Dropsy on the Chest	1	Thrush	4
Fever	4	Unknown Causes	10
Fever, Scarlet	7		
Fever, Typhus	4		
Gout	1		
Hæmorrhage	3	Stillborn	17

Decrease of Burials, as compared with the preceding week . . . 81

METEOROLOGICAL JOURNAL.

Oct. 1833.	THERMOMETER.		BAROMETER.	
Thursday . 31	from 37 to 54		29·98 to 29·91	
November.				
Friday . . 1	42	61	29·72	29·89
Saturday . 2	39	55	29·96	29·80
Sunday . . 3	37	49	29·81	29·93
Monday . . 4	27	49	30·02	30·14
Tuesday . . 5	27	54	30·21	30·05
Wednesday 6	39	55	29·98	29·94

Prevailing wind, S. W.

Except the 3d and 4th, generally cloudy, with rain at times; ice on the ponds thick as a half-crown, on the morning of the 4th.

Rain fallen, ·125 of an inch.

ERRATUM.—In Dr. F. H. Ramsbotham's lecture, in our present No. p. 180, *for* "pendulum," *read* "pudendum."

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 16, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture VI.

FEMALE ORGANS OF GENERATION.

INTERNAL ORGANS.

The internal organs of generation consist of the *vagina*, the *uterus*, and the *uterine appendages*, —which latter are two *broad ligaments*, two *round ligaments*, two *ovaries*, and two *fallopian tubes*.

Vagina.—The *vagina* is a musculo-membranous canal, running up the centre of the pelvis, leading from the external parts to the os uteri, in its progress describing a curve even greater than that of the sacrum and coccyx, having the neck of the bladder, the urethra, and the symphysis pubis anteriorly, and the rectum behind. In length it is about four or five inches; in circumference about three. It varies much, however, in different subjects, and is capable of extension to an extraordinary degree. In married women, and those who have had a family, it is considerably more capacious than in virgins; it is also observed to be wider in the middle than at either extremity, and longer on its posterior surface than anteriorly. It is composed of three coats—an external, cellular; a middle, muscular; and an internal, mucous. The external coat is merely a collection of condensed cellular structure, by which it is attached to the parts surrounding it. The middle coat is muscular, and the fibres follow different directions; some are longitudinal, some transverse, and some oblique. It is observed that these muscular fibres are much more numerous at the commencement of the vagina than at any other part. Here they seem arranged in concentric circles, taking their origin from the sphincter ani, to which formation anatomists have given the name—improperly, in my opinion—of *sphincter vaginæ*. The internal coat is mucous, and is a continuation of the membrane which lines the external parts; it is collected into transverse, or rather oblique rugæ; and from this circumstance it has also obtained the name of the *rugous coat* of the vagina.

These folds are much more apparent in the virgin, than in women who have borne children; and, like the muscular fibres, they are found in the greatest number at the lower end, near the commencement. Here [presenting them] are two preparations, one the vagina of a virgin, the other of a woman who has had a family. You will observe the rugæ distinctly marked in the former, while in the latter this peculiar appearance is quite obliterated. In the interstices of these folds are placed a number of follicles, which, independently of the mucus poured out by the vessels proper to the membrane itself, secrete a fluid of a peculiar character. The membrane is puckered thus principally for the purpose of allowing the distention of the vagina during the passage of the child's head.

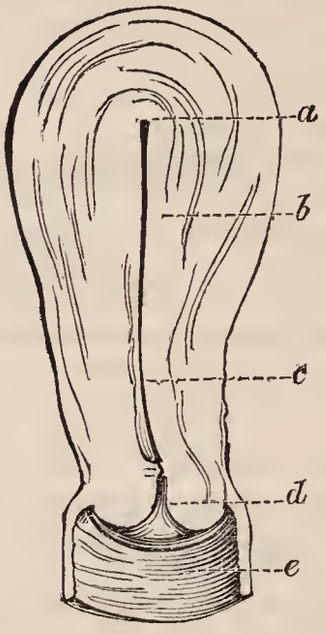
This organ is very plentifully supplied with blood-vessels, with nervous filaments, and absorbents. It obtains its blood through branches of the two uterine arteries, which are given off from the internal iliacs or hypogastrics. The common iliacs divide into two channels, the external and internal; the internal descends into the pelvis, over the sacro-iliac syncondroses. From them arise the uterine arteries, which run up one on each side of the vagina, and in their course give off four or five transverse branches, which supply the vagina itself. Its nerves are principally derived from the sacral

plexus; its veins accompany the arteries; and the absorbents pass in two directions, one division to the glands in the sacrum, and the other to those in the groin. The vagina is connected then below with the external parts by a continuation of structure; anteriorly, with the symphysis pubis, the urethra, and the neck of the bladder, by cellular membrane; above, with the cervix uteri; and behind it is attached to the rectum. The commissure connecting the two organs is called by anatomists the *recto-vaginal septum*. It runs down in connexion with the rectum through a great part of its extent; and you might suppose that the orifices of these two canals would be close together, almost touching each other; but this is not the case; for the vagina, at its lower end, turns at an angle forwards, while the rectum, just before terminating in the anus, is directed somewhat backwards, a space of about an inch in extent being left between them, which you will recollect is called the *perineum*.

The secretion of the vaginal membrane, in the ordinary healthy state of the parts, is pretty exactly balanced by the natural absorption, so that there is little or no exudation externally; but under peculiar states of excitement, under some diseases also, as well as under labour, the secretion much exceeds the absorption, and a discharge appears outwardly.

Uterus.—At the upper part of the vagina, hanging in the centre of the pelvis, behind the bladder and before the rectum, with its superior edge somewhat peeping up above the brim of the pelvis; supported in this situation by two ligaments which run from its sides to the ilea, and by the vagina which is below, we observe the *uterus, matrix*, or *womb*, the organ destined to receive, to afford lodgment and nourishment to, and eventually to expel the ovum. The uterus is derived from the Greek *υστερα*.

In shape the uterus is somewhat triangular, or rather like a flattened pear; and it is observed to be rounder on its posterior face than anteriorly, from which circumstance, in the unimpregnated state, we can always distinguish the right from the left side. In length it is about three inches; in width, at the widest part, it is about two inches; and in thickness pretty nearly an inch. It varies, however, in different subjects, being in some degree larger in women who have borne many children, and smaller in virgins. Anatomists, for the facility of teaching, describe it as though it consisted of four parts; to the upper third they give the name of *fundus*, to the middle the name of *body*, and to the lower third that of *neck;* while its opening into the vagina they designate the *os uteri*, or *mouth of the womb*. Now the three first of these divisions are perfectly arbitrary; there is no septum in the uterus, no line of demarcation either externally or within, by which we can point out their limits; not so, however, with regard to the os uteri, which is the means of its communication with the vagina—a natural aperture.



Longitudinal section of the uterus, about three-fourths the natural size.—*a*, the fundus uteri; *b*, its body; *c*, the cervix; *d*, the os uteri; *e*, a small portion of the upper part of the vagina. The central line shews the direction of the cavity.

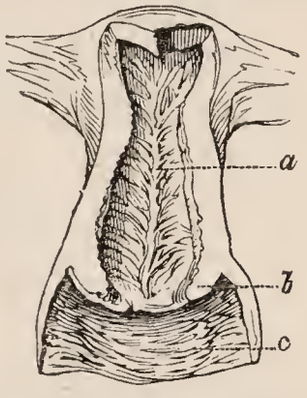
The uterus is covered externally by the peritoneum; it has a cavity which is lined by mucous membrane, and a peculiar parenchymatous structure between the two. The peritoneum, after having lined the abdominal muscles, rises over the bladder, giving a covering to a very considerable portion of that viscus; it then passes from the neck of the bladder directly backwards to the cervix uteri; it mounts over the uterus, and descends on the back part somewhat lower than in front, dipping even a little beneath the os uteri, and affords an external coat to a very small portion of the vagina, separating the uterus entirely from the rectum; it is then continued from the upper part of the vagina to the lower gut, and ascends to embrace the bowels. From the sides of the uterus processes are sent off, which constitute the broad ligaments.

The parenchymatous structure of this organ is of a very dense character, in appearance much resembling a half-tanned hide. On making a section of it, we observe a great number of very minute tortuous vessels running throughout its whole substance, in the unimpregnated state scarcely capacious enough to receive the finest injection; but they take upon themselves a process of growth as soon as conception has occurred; and towards the end of pregnancy are sufficiently large in calibre to admit the introduction of a goose-quill—at least many of them are.

The parenchyma of the uterus is generally described by anatomists as being muscular; but there is even now some difference of opinion as to whether it is muscular or not. My father strongly insists upon the non-muscularity of this organ; and in this respect he follows two very great physiological authorities, Bichât and Blumenbach: the latter was of opinion that the uterus possesses a structure perfectly *sui generis*, unlike that of any other organ in the body. He says, "I have never yet discovered a true muscular fibre in any human uterus which I have dissected, whether impregnated or unimpregnated, recent or prepared;" and again, "I am daily more convinced that the uterus has no true irritability, but a *vita propria*, provided such may be allowed to any part of the body. This organ appeared to possess properties so peculiar to the ancient physicians and philosophers, that it was by them denominated an animal within an animal." This last idea, indeed, originated with Plato, who described it as one animal living within another, controlling all the actions of the vital system, burning to sate itself with the fluid most congenial to its wants, and to digest it for the purpose of forming another being. On the contrary, in the present day anatomists regard it as merely a part of the whole economy, and most of them are in the habit of describing it as muscular. Some indeed tell us they can easily point out its muscular fibres. Vesalius described three strata of muscles, transverse, perpendicular, and oblique; Malpighi speaks of them as arranged in a kind of net work; Ruysch maintains that they appear at the fundus, forming an orbicular muscle; while Dr. Hunter delineates them as transverse in the body of the uterus, but at the fundus sweeping in concentric circles round each of the fallopian tubes. Sir Charles Bell is the last anatomist who has given us any particular dissections of the muscular fibres of the uterus, and he professes to demonstrate them as easily as in any other organ. He says, "the substance of the gravid uterus is powerfully and distinctly muscular. Towards the fundus the circular fibres prevail; towards the orifice the longitudinal fibres are most apparent; and, on the whole, the most general course of the fibres is from the fundus towards the orifice. This prevalence of the longitudinal fibres is undoubtedly a provision for diminishing the length of the uterus, and for drawing the fundus towards the orifice. At the same time these longitudinal fibres must dilate the orifice, and draw the lower part of the womb over the head of the child."

I shall not myself enter into the controversy whether the uterus is muscular or not, partly because my mind is not definitively made up on the subject, and partly in deference to the opinion of my father. I can only say, that if it be a muscular organ, the muscles, for their size, possess a much greater power than any other in the body; that they are of a different character to most muscular fibres, for instead of being red, fleshy, and bulky, they are thin, spare, and pale; and as it is an established doctrine, that in general the stronger the muscle the more florid its appearance, we ought at least to expect that these minute fibres in the uterus, which possess such extraordinary powers of contraction, would be of a transcendently deep colour. However, I shall leave you to determine the question for yourselves; and I would recommend you, as most anatomists agree in this respect, to call it a muscular organ.

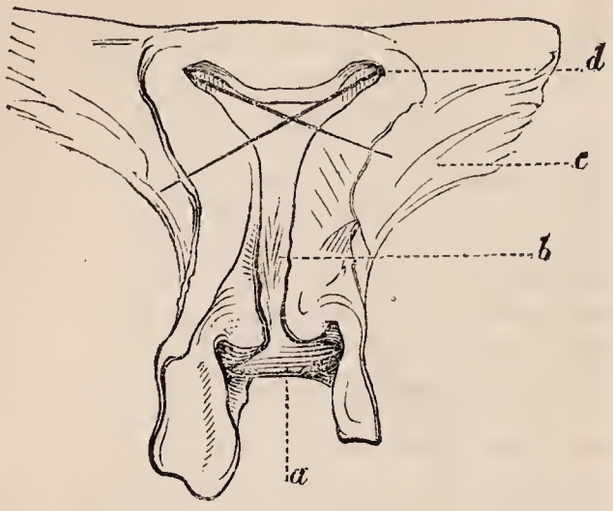
This viscus, then, contains a cavity which is lined by mucous membrane, being a continuation of that lining the vagina. The membrane is puckered into longitudinal or arborescent striæ towards the mouth of the womb, more evident in the virgin than in women who have had children. This formation is denominated the *arbor vitæ*. In the infant, the whole inner membrane is corrugated. Here



Infantile uterus laid open to shew the rugæ of its inner coat. — *a*, the inner membrane of the uterus; *b*, the os uteri; *c*, the upper part of the vagina.

[exhibiting it] is a preparation taken from a young subject, in which these rugæ are very evident. The cavity is somewhat similar in shape to the external form of the uterus—that is to say, it is rather triangular, and large enough to contain a split almond. In the cavity there are three apertures, two at the angles of the fundus, the uterine apertures of the fallopian tubes, and one below, communicating with the vagina, the mouth of the womb. It is worthy of remark, that the uterine apertures of the fallopian tubes open into the cavity not directly in a straight line opposite to each other, but somewhat obliquely; from which arrangement two bristles passed along the fallopian tubes would cross each other at a considerable

angle when received into the uterine cavity.



The uterine cavity laid open.—*a*, the os uteri. *b*, the cervix uteri: the longitudinal lines shew the appearance called arbor vitæ. *c*, a portion of the broad ligament. *d*, the uterine extremities of the fallopian tubes, with a bristle inserted into each.

The opening into the vagina is called the *os uteri*, *os tincæ*, *os internum*, or the *mouth of the womb*, and by it a free communication is permitted between the cavities of the vagina and the uterus. (The phrase *os tincæ* has been applied, from its fancied resemblance to the mouth of a tench fish.) But we are not to suppose that the uterus is connected with the vagina by a direct continuation of their separate structures; on the contrary, the vaginal coats run up a few lines above the orifice, to terminate at the cervix uteri; and the mucous membrane is reflected over its mouth, to line it within; so that the os uteri pouts and projects somewhat into the vagina, at an angle, looking considerably backwards, towards the centre of the hollow of the sacrum. In the adult subject, the os uteri is of an oval shape, the slit being lateral, so that it is divided into an anterior and posterior lip. Thickly studding the os uteri, as also the cervix, we observe a number of glands—follicles, if you please—which are scarcely percepticle in the healthy uterus of the virgin; but they enlarge very much in some diseases, and partieularly under pregnancy, during which state they become very evident, as you may see here [presenting a specimen.] With this increase of size a new office is afforded them, and they pour out a thick, tough, pellucid, gelatinous mucus in considerable quantities, which blocks up the entrance to the cavity of the uterus, and breaks off the communcation between it and the vagina; and as long as this mucus remains *in situ*, no fluid can be injected into the uterus. Here [presenting it] is the cervix uteri of a cow, in which the mucus is very plainly shewn.

The uterus is very liberally supplied with blood-vessels, with nerves and absorbents. The arteries are from two sources; one set, the *spermatic*, descend, as we shall see delineated in Tiedemann's plates, from the aorta, below the renal arteries, sometimes by one trunk from the anterior part of that vessel, and sometimes by two trunks, one on each side; at others, they have been known to take their origin from the renal arteries. They descend with the same tortuous inflections as the spermatic vessels in the male do, forming the appearance called the pampiniform flexus, supply the ovaries, and afterwards run along the broad ligaments, to expend themselves in the uterus; — the other the *uterine*, which are given off from the internal iliacs, and anastomóse very freely with the uterine branches of the spermatic. By these two sets of vessels, then, a very copious supply of blood is allowed,—one originating high up in the loins, and the other low down in the pelvis. The veins follow the course of their respective arteries. The spermatic have the same termination as the spermatic veins in the male—the right in the inferior cava, the left in the renal vein. The uterine veins empty themselves into the internal iliacs. The nerves also are from two sources: one supply is derived from the lumbar ganglia, the other from the great sympathetic; and it is through the filaments of the latter nerve that most of the vital organs of the body, especially the stomach, sympathize so completely with the uterus, as well under disease as under pregnancy. The absorbents also run in two directions, one into the lumbar and sacral glands, and the other through the round ligament into the glands of the groin. I suspect, in the healthy unimpregnated state, the uterus itself is not particularly sensitive. The connexions, then, of this organ are with the sides of the pelvis, by the broad ligaments which principally support it; with the vagina inferiorly; with the neck of the bladder anteriorly, by cellular substance; and with the groin, by means of the round ligament. It cannot be said to be connected with the rectum, because the peritoneum dips down sufficiently low to separate it perfectly from that gut, giving an outward tunic to a small portion even of the vagina. In this respect the posterior differs materially from the anterior surface of the uterus, because we have demonstrated a direct connexion between the cervix uteri and the neck of the bladder, by cellular tissue.

In most of the mammalia, the uterus is divided into two convoluted chambers, one on the right, the other on the left side, quite distinct from each other, but communicating with the same vaginal orifice; so that it assumes a double cornuated appearance—each cornu answering to the fallopian tube in the human subject. In monkeys it par-

takes more of the human shape; having, however, a slight depression at the summit of the fundus, exactly in the centre. Not only in external figure, therefore, but in the shape of this as well as other viscera, this order of beings seems to form a connecting link in the chain of nature between man and the lower animals.

Broad ligaments.—The next organs that I shall describe are two of the appendages of the uterus, and are called the *broad ligaments.* They are extensions of the peritoneum, running, as you see in this accurate cast made by the late Mr. Joshua Brookes, from the angle of the fundus of the uterus, horizontally to the brim of the pelvis, and are merely duplicatures of the peritoneum, containing within, on their upper ridge, the fallopian tubes; at their lower part the ovaria; and also blood-vessels, nerves, and absorbents. These ligaments have been called, in consequence of their shape, spreading out from the sides of the uterus, as it were, like the wings of a bat, the *alæ vespertilionis.* There is also another extension of this ligament on each side, which is not usually described, but well shewn in the cast, consisting of two processes that run to the sacrum and lower lumbar vertebræ; they, in conjunction with the lateral ligaments, are for the purpose of supporting the uterus in its situation, while hanging in the centre of the pelvis, and of guiding it in its ascent to the abdomen during the middle months of pregnancy.

Ovaria.—Between the folds of each broad ligament, dangling as it were at the lowest part, at the distance of about two inches from the uterus, we have a round glandular body, about the size of a small flattened nutmeg, to which we give the name of *ovarium,* and which was called, previously to the time of Stetonis, who first asserted that these glands were analogous to a true ovarium, the *female testis.* Enclosed within this duplicature, it obtains its external covering from the peritoneum; its surface in consequence is smooth and shining. When a section is made, a number of small cavities are observed, varying in size, from the minutest shot to that of a small pea, the lesser being within, the larger more towards the surface. The fluid which these cavities contain is pellucid and coagulable by alcohol, heat, and the strong acids; composed, therefore, principally of albumen. In number they vary from 15 to 20 in each ovarium. They are called, after the name of their first describer, *vesiculæ Graafianæ.* We may remark them sometimes actually rather eminent upon the surface. In the course of my dissections, I have, in one subject, seen two or three projecting under the peritoneum, studding the external surface of the gland like beautiful little pearls, and on pricking them the fluid has exuded. We do not see these vesicles at all previously to puberty before the ovary is developed; they disappear towards the close of life, when the gland is shrivelled by age; and are found in the greatest number, and most apparent, in the adult virgin. In the married woman we observe, besides these vesicles, other bodies, to be presently mentioned. The vesiculæ Graafianæ have been supposed to be real ova, and from thence the term ovarium has been derived. This idea is now exploded; but we are perfectly satisfied that they contain whatever the female supplies towards the formation of the embryon—their contents passing into the fallopian tube, to amalgamate with the male semen, and, in conjunction with it, to call a new being into existence.

Corpus luteum.—In the ovary of a woman, then, who has had a family, we observe, besides these vesicles, which are not so numerous as in a mature virgin, some little solid bodies, the size of a small pea, of a yellow or light brown colour, to which we give the name of *corpora lutea,* and which are supposed to be cicatrices, left by the escape of a corresponding number of vesiculæ Graafianæ. When the minute sac containing the fluid bursts, it is believed that the rupture of a vessel is occasioned. This vessel sheds a drop of blood into the cavity which before contained the fluid; the thinner parts become absorbed, while the more solid become organized; and this is supposed to be the origin of the corpora lutea. You may observe a splendid example in this preparation [exhibiting it].

The corpora lutea, till lately, were considered true tests of impregnation having taken place; nay, many physiologists of considerable reputation, among whom I may mention my respected friend, Dr. Thatcher, of Edinburgh, (to whose instructions I owe much of my obstetrical information), regard them still as sure signs of a woman having conceived. I am led to hold a contrary opinion, from the experiments of Haighton and Blundell, which I think have set the question perfectly at rest. A buck and a doe rabbit were allowed to be sufficiently close to observe each other, but were not permitted to come together. After the heat had passed away, the doe was killed, and although she was a virgin, and had never had communication with the male, corpora lutea were distinctly observed in her ovaries. This experiment has been repeated over and over again, and generally with the same results.

I have said that the ovarium supplies whatever the female provides towards the formation of the new being. This is proved

to demonstration by spaying animals, an operation which consists in taking away the ovaries. When both these bodies are removed, the subject has no longer any desire for copulation, loses the characteristics of her sex, and assumes more or less those of the male. This is remarked in all animals, but is particularly observable in the feathered tribes. If the ovaries be removed from a common domestic hen, she soon becomes decked with somewhat of the cock's plumage, her voice becomes changed, and instead of her usual cackle, she utters an imperfect crow. In the female of the human subject long straggling hairs grow upon the chin, the breasts become flabby, being deprived of part both of their fat and glandular structure, the skin loses its soft smoothness, the voice becomes harsh and discordant, and the individual might easily be mistaken for a male. Nor are the moral less influenced than the physical properties: sexual feelings are destroyed, and the delicacy of the female character disappears. This change was strictly exemplified in Mr. Pott's celebrated case, where both ovaries were removed in an operation for hernia. Similar results, indeed, take place, as are observed after castration of the male: so that to the presence of these little bodies, the testes in the male, and ovaria in the female, are to be attributed the distinctive physical marks and moral attributes of the two sexes.

The ovarium, then, is the most essential part of the female organs, and is universally found in the sexual genera of animals. They are very liberally supplied with blood from the spermatic arteries.

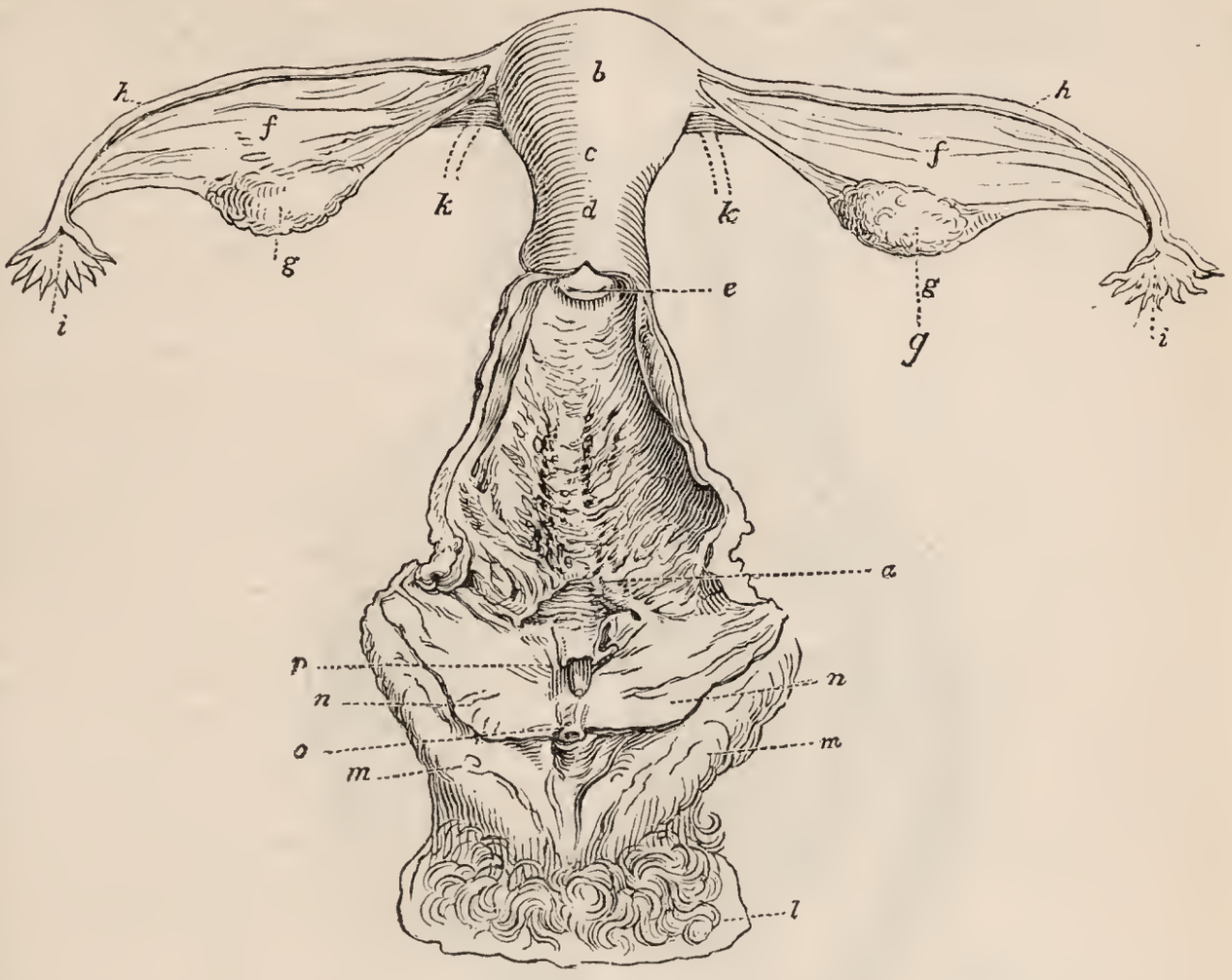
In birds, the ovarium resembles a bunch of grapes; in snakes, a string of yellow beads.

In young hens, the ovarium is said to contain about 400 yolks, from the size of a pin's head to their largest magnitude. The ovarium in fishes encloses an almost incredible number of ova. In a perch, of one pound two ounces, there were found 69·216; in a mackerel, of one pound three ounces, there were 129·200; in a carp, of eighteen inches in length, Petit found 342,144; and in a sturgeon, of one hundred and sixty pounds, there were 1,467,500.

Fallopian Tubes.—Running along the upper edge of each broad ligament there is a pervious canal, having two open extremities—one end communicating with the uterine, the other with the peritoneal cavities: to these we give the name, after their first describer, of *Fallopian tubes.* They are about four inches in length; they are covered externally by the peritoneum; possess a middle coat of muscular fibres, which run longitudinally, transversely, and obliquely, and an internal mucous coat, a continuation of the mucous membrane lining the uterus. At the abdominal extremity they are fringed, as we may see in the specimens on the table, and float loose and unconnected;—to this part of the tube the name of *fimbriated* extremity is given; from its office it has been called the *morsus diaboli*—the devil's bite. The mucous membrane which lines the tube is continued to the *fimbriæ*, and it is the only instance in the body where a mucous and a serous membrane join by continuation of structure—the only example, then, of a mucous membrane terminating in a shut cavity.

It is through this tube that the ovum, after impregnation, passes into the uterine cavity; and the mode in which it is effected is supposed to be the following. By its own inherent muscular power, the fallopian tube under the *æstrum venereale*, erects itself somewhat like a snake raising its crest. By the same inherent muscular power it directs itself to the ovarium, it widely spreads its fimbriæ, expands itself upon the external surface of the gland, closely embraces it, and squeezes from it the contents of one or more of the vesicles of De Graafe. Freighted with their precious cargo, the fimbriæ approximate each other, close the orifice, before wide spreading and patulous, and a motion somewhat like the peristaltic action of the intestinal canal is then set up in the tube, by which means the ovum, now impregnated, traverses the length of the canal until it drops into the uterine cavity. We have both negative and positive proof of the strongest kind, that the ovum passes through the fallopian tube before it arrives at the uterus—*negative*, because there is no other canal through which it can be conveyed, there being no direct communication between the ovarium and the uterus; *negative* also, because, if we follow the experiments of Blundell, and cut away a portion of the fallopian tube from each side, so as to destroy the continuity of the canal, we prevent conception, although we do not take away the desire for copulation;—but further, we have *positive* proof, because an impregnated ovum has been frequently found within the tube; it has been arrested in its transit, formed a bed for itself within the dilated canal, and there grown; constituting a species of that disease termed *extra-uterine conception.* Thus we cannot for a moment doubt that the ovum travels along the fallopian tube to gain the uterine cavity. The sensation commuicated to the finger by squeezing the tube, is very much like that of the spermatic cord. It is hard, firm, and wiry. In its office it is analogous to the vas deferens of the male.

Round ligaments.—We have next to describe the *round ligaments* of the uterus—two small circular cords, made up of a congeries of vessels which, arising from the sides of the fundus of the uterus, anterior to and rather below the fallopian tubes, run along



The generative organs; the back surface of the vagina split up.—*a*, the vagina: the rugæ and mucous follicles well displayed. *b*. the fundus of the uterus. *c*, its body. *d*, its neck. *e*, the os uteri. *f*, *f*, the broad ligaments. *g*, *g*, the ovaries. *h*, *h*, the fallopian tubes. *i*, *i*, their fimbriated extremities. *k*, *k*, the round ligaments dissected out. *l*, the mons veneris. *m*, *m*, the labia externa. *n*, *n*, the nymphæ. *o*, the glans clitoridis, covered by its prepuce. *p*, the meatus urinarius, into which the barrel of a quill is inserted.

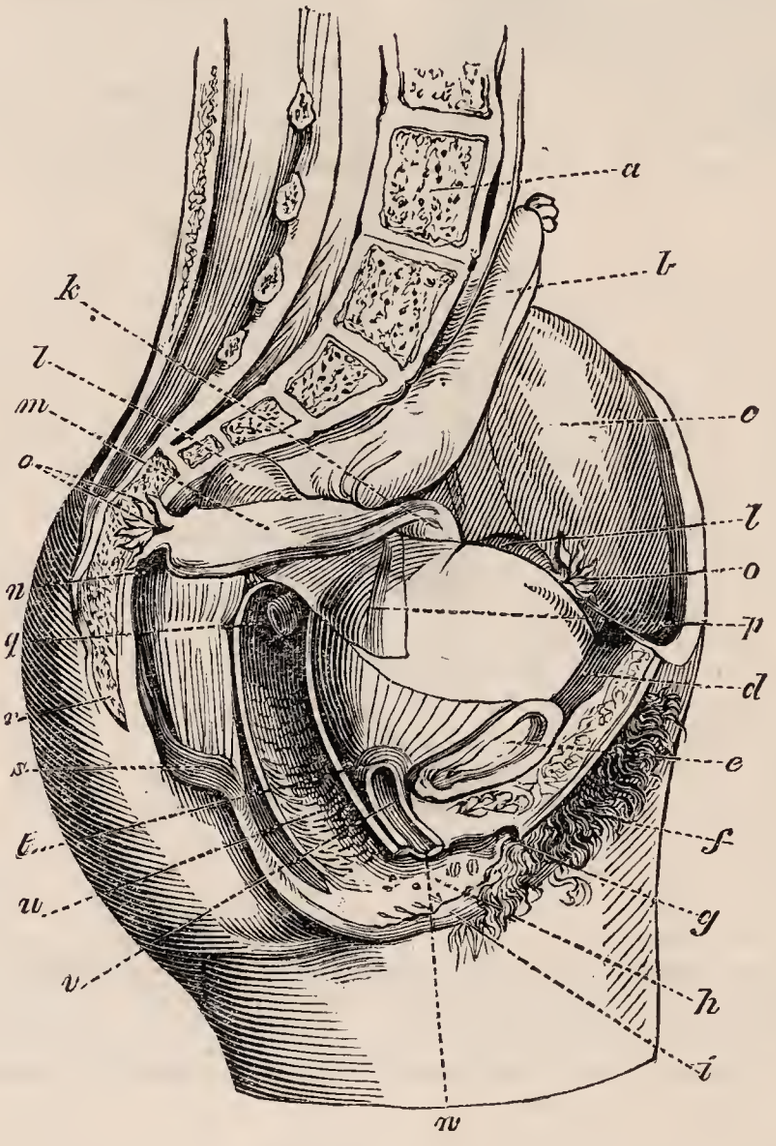
the broad ligaments until they arrive at the sides of the pelvis. They then leave the broad ligaments, and, turning forwards, take their course round just below the brim, eventually pass out at the ring of the external oblique muscle, and are lost in the groin and parts adjacent. They consist of a congeries of blood-vessels, nerves, and absorbents; and by them a direct communication is kept up between the uterus within the pelvis, and the groin on the outside. It is through this direct communication that, in some of the malignant diseases of the uterus, the glands in the groin take upon themselves unhealthy action, and become enlarged, indurated, and occasionally ulcerated.

Analogy between the genital organs in the two sexes.—Aristotle, Galen, and their wordy commentators, have fancied a great analogy between the organs of generation in the two sexes, and tell us that they only differ in position—being external in man, and internal in woman. Sir E. Home seems, in some respect, to follow the same idea in the singular hypothesis he framed. He suggests that the sex is not determined at the first formation of the individual, but that the parts of generation are originally so situated, and of such a structure, that they are capable of being perfected into either male or female organs when the sex is subsequently stamped. It cannot be denied that there is considerable resemblance between the ovaries and testes—the fallopian tubes and vasa deferentia—the penis and clitoris;—but surely the speculation is too finely spun.

DEMONSTRATION OF THE RECENT PELVIS.

I shall now demonstrate to you the recent pelvis, and in the first place require your attention to the preparation before me. Here are the rami of the ischium and pubis sawn through; the bladder,

the urethra, the vagina, the uterus, the rectum, the ovaries, the broad and round ligaments. We observe the vagina traversing the centre, and the uterus hanging between the rectum and bladder, supported by the broad ligaments; we see the round ligament running horizontally by the side of the bladder, out of the pelvis to the groin. The intimate connexion between the neck of the bladder and the cervix uteri may be observed in this other preparation. Mr. Brookes's cast also, and a German model on the table, shew the contents of the pelvis very plainly.



Section of the female pelvis.—*a*, the vertebræ. *b*, rectum. *c*, left iliac fossa. *d*, the edge of the rectus femoris springing from *e*, the symphysis pubis. *f*, mons veneris. *g*, clitoris. *h*, left nympha. *i*, left labium externum. *k*, fundus uteri. *l*, *l*, ovaries. *m*, right broad ligament. *n*, right fallopian tube. *o*, *o*, fimbriated extremities of the fallopian tubes. *p*, right round ligament: the dotted line crosses the fundus of the bladder. *q*, os uteri. *r*, point of coccyx. *s*, sphincter ani. *t*, sphincter vesicæ. *u*, vagina. *v*, urethra: the dotted line crosses the perineum. *w*, meatus urinarius.

Now the linings of the pelvis are worthy of consideration. On removing the peritoneum, we observe a broad fan-like, or rather funnel-shaped muscle, rising from the bones below the brim, perforated by the urethra and vagina, and inserted into the sphincter ani: it is called the *levator ani*. On dissecting away these fibres, we observe the *obturator internus*, another muscle taking its origin from a part of the internal surface of the obturator ligament, running round the ischium like a pulley, through the small sacro-sciatic foramen, to be inserted into the root of the trochanter major. We observe the *pyriformis*, which rises from the side of the sacrum and passes out of the pelvis through the large sacro-sciatic foramen to be inserted also at the root of the trochanter major, near to the obturator. These muscles rotate the thigh outwards, they are pressed on during labour, and they are sometimes the seat of the pain which is felt in moving the thighs after parturition. We are not to believe that every pain which a woman feels when she moves her legs is the consequence of inflammation; for it may be produced merely by the pressure these muscles have suffered during the passage of the child. There is another muscle rising from the spinous process of the ischium, and passing backwards to support

the coccyx—*the coxygeus.* This is sometimes strained when the child's head presses outwards, and it gives pain occasionally in evacuating the rectum after delivery. We see the *psoas* and *iliacus internus* running outside the brim of the pelvis over the horizontal ramus of the pubis, to be inserted into the trochanter minor.

The arteries and nerves are also worthy of our attention. The external iliac artery runs over the brim of the pelvis by the side of the psoas muscle, so that it is not liable to pressure under labour. The internal iliac runs along the inner edge of the sacro iliac symphysis, and this may probably be compressed in some degree during the birth; not, however, to such an extent as materially to impede the circulation, because it lies deeply imbedded and cushioned in the surrounding structures. The same remark applies also to the internal iliac veins.

The nerves run in four divisions. There are four or five branches of cutaneous nerves, which rise from the last dorsal and two or three first lumbar, traverse the iliac and psoas muscles, and are expended on the integuments of the pelvis and of the fore and outer part of the thigh. These nerves are too high to suffer under labour, but during the last few weeks of pregnancy they are liable to pressure, which produces numbness in the seat of their distribution. The anterior crural nerve, one of great magnitude, takes its origin from the second, third, and fourth lumbar, passes over the pelvic brim outside the femoral artery to be distributed principally to the rectus femoris and other extensors of the leg. It also is out of the way of pressure under labour, but, like the cutaneous branches, may suffer towards the close of utero gestation, to such an extent as to produce cramps on the inner and fore part of the thigh. Thirdly, we have the obturator nerve, which also rises from the second, third, and fourth lumbar, runs round below the brim of the pelvis, and passes out at the upper part of the obturator foramen. This is distributed to the adductor muscles of the thigh, and sometimes produces cramps on the inside of the thigh at the commencement of labour, while the child's head is entering the brim. Fourthly, we have the great sciatic nerve, rising from the fourth and fifth lumbar, and from the first, second, and third sacral nerves. It is the largest nerve in the body. It lies over the sacro-iliac symphysis, passes out by the side of the pyriform muscle, through the large sacro sciatic foramen, to be distributed to the posterior part of the thigh, and to supply the leg and foot. This nerve, situated at the back part of the pelvic cavity and passing entirely through, is particularly exposed to pressure during child-birth, and it is not surprising that much inconvenience should result. Nothing is more common, especially under lingering labour, than for a woman, when the head is fully occupying the pelvis, to complain of violent cramps at the back of the thigh, and especially the calf and plantar sole, adding much to the agony she endures. The fourth sacral nerve is entirely distributed to the parts within the pelvis and about the anus. The fifth is sometimes wanting, and always very small.

Thus, when first the uterus subsides, preparatory to its taking on expulsive action, the cutaneous and crural nerves suffer, producing numbness and pain at the fore part of the thigh; when the head is passing through the brim, the obturator may suffer, producing cramps on the inside of the thigh. When the labour is well advanced, the sciatic nerve may be pressed on, and violent cramps at the back part of the thigh, the calf of the leg, and the sole of the foot, are the consequence; occasionally, indeed, lameness or partial paralysis continues for some time afterwards. The varicose state of the veins, and anasarcous swelling of the lower extremities, so common under pregnancy, also originate from pressure, and mostly disappear, or are much relieved, after the termination of the labour.

[The Doctor concluded by demonstrating Tiedemann's folio plates of the uterine arteries and nerves; in which, he stated, they were better marked than in any other which he knew.]

CASE OF PSOAS ABSCESS.

(Communicated by Sir James Macgrigor.)

Cape of Good Hope, July 23, 1833.

Sir,

In the beginning of May of this year, L. C. V. ætatis 40, appeared to all his numerous friends and acquaintances as likely to enjoy a long continuance of good health as any person in the garrison: he was naturally endowed with a strong constitution, and he was of very active and temperate habits. Many years ago he had suffered from remittent fever, while serving on the insalubrious west coast of Africa; and he had then, also, disease of the liver, which he stated to have been accompanied with uncommonly severe spasms of the diaphragm, from which, however, he quite recovered by going to England.

On the 19th of May last he was seized with rigors, pain and tenderness in the right side, just below the ribs, and sense of great weariness over the body. He stated that during the preceding eighteen months he had frequently felt pain in the side, shooting towards the back and loins, which was particularly apt to be excited, or sensibly increased, if at any time he happened to slip his foot, or knock it against any hard substance, and which he considered as warning him that his liver was unsound; but he took no other medicines for it than an occasional dose of calomel, with some other purgative medicine.

For several months he had also, at times, felt a tenderness, and observed a redness in the ball of the right great toe; and he had suffered from heartburn, which made him suspect that he was becoming gouty, as his father was afflicted with that disease; but his general appearance was most healthy.

On the evening of the 20th of May I was called to see him along with his surgeon, and found him labouring under symptoms of acute inflammation of the liver. He felt uneasiness all along the outer margin of the organ; but at the part where the cartilages of the false ribs turn upwards, it was more particularly sensitive and painful to the touch than at any other. After a few days, and while he was apparently going on very favourably towards recovery, he got a strain in sitting down awkwardly upon a bed-pan, which made him scream out from the pain it occasioned in the right hypogastrium, and which continued to give him great uneasiness for many days afterwards. I thought at the time that the pain was more severe than would have been caused in a healthy person by the strain, which from description appeared slight; and I therefore considered it as connected in some way with the disease of the liver. Additional antiphlogistic measures were had recourse to, both local and general, to subdue the pain in the hypogastrium, and the hepatic symptoms; and in six or eight days he was able to sit up, and seemed convalescing so favourably that I began to leave off visiting him regularly every day.

About the 12th of June I called, when he was sitting up at dinner, and was very much struck with his pale and haggard appearance. He was complaining of pain in the back and right thigh, extending as far as the knee, with a degree of weakness and lameness of that extremity, which he was attributing to the probable effect of cold, and considering as rheumatism; but it was too evidently of a different and more serious nature, and on examination along with his other medical attendants, it was found that he did not stand up straight, or that when he attempted to do so, he raised his right knee towards his body; that he had pain in the right hypogastric region, and in the right side of the loins, about the origin of the nerves of the thigh; and that pressure upon these caused the most violent increase of pain in the former parts, although no redness or swelling was perceptible in any of them.

Cupping, fomentations, blisters, and poultices, were repeatedly applied, anteriorly and posteriorly, over the site of the right psoæ muscles, and the origin of the obturator and crural nerves, which evidently appeared to be the seat of the evil, and, after the application of these means, the pain in the thigh and knee subsided, but it could still be readily re-excited by pressure on the loins. He had not been able to bear his thigh to be straightened from the time of the strain, and constantly kept it in a half-bent posture.

He himself considered his complaint to be of a trivial nature, and thought we were making a great deal too much of the pain in his loins, and used to say that he was sure that both that and his thigh would soon get well if he were allowed to take exercise, and was rather annoyed at our examining the parts so often and so minutely, and at our enjoining perfect rest in bed.

It was now observed that vesperal fever was beginning to set in: it was unattended with rigors, but he had a good deal of perspiration towards morning, and we saw that he was becoming hectical.

We continued to examine the loins and iliac region most minutely, yet no sensible enlargement could ever be *distinctly* discovered about the parts, either by the sight or touch, nor could any fluctuation be distinguished even to the last. It was very seldom that he complained of any pain in the loins or hypogastrium, except when these parts were pressed, or that he had occasion to move. Still the disease insidiously gained upon his constitution; he was gradually emaciated; his pulse rose

much in frequency towards evening; his nights were restless; his strength declined daily; and we soon felt that we were struggling against a mortal disease. It was evident, from the general symptoms, that suppurative inflammation was going on, although the formation of matter was not announced by rigors; and the local symptoms pointed out that its seat was in or about the right psoæ muscles, and that it was most probably confined there by the strong aponeurotic fascia about them and the other muscles of the loins.

When medical men encounter diseases of a dangerous character in any one, more particularly in one of their friends, their attention is arrested in the most forcible manner; they anxiously watch the progress, and weigh the danger, of the rising symptoms, and exert their utmost skill in the application of remedial means. Such was the case in the present instance: the patient had now four intimate friends attending him, who, aware of the increasing danger, considered that the only chance of effecting a cure was by getting directly to the indicated seat of the disease, in order to allow an exit to confined matter; and therefore decided on making an incision through the tendinous aponeurosis of the muscles of the back, down to the proper muscles of the loins; which was done accordingly.

The incision was carried, first, through the integuments; secondly, through the tendinous expansion of the latissimus dorsi; and, thirdly, along the outer edge of the longissimus dorsi, through the sacro-lumbalis, down to the quadratus lumborum. The latter muscle was exposed to the extent of an inch and a half, but coming to no pus, and being still unable to distinguish any fluctuation, it was thought advisable to carry the incision deeper; *although it will appear afterwards that we should have gone through the quadratus lumborum also, to have attained the end in view.* We hoped that if any formation of matter was more deeply lodged, it would make way outwards in this direction, as the chief impediments to its coming to the surface were now removed; and the wound was dressed with lint to the bottom, to keep it open, and poultices were applied, to bring on a discharge and establish a drain from it.

We had satisfied ourselves before hand that the operation would do no harm, if it did no good; and he thought at first that he was relieved by it; but our hopes were disappointed, and it proved of no real service.

All the symptoms of hectic fever continued gradually to increase; the liver had become again tender and painful, and seemed tense and enlarged just over the site of the gall-bladder, so that we suspected suppuration had formed in the liver. The bowels, which had frequently been irritable and irregular during his illness, were now with difficulty kept under restraint and in due order. The right knee and leg were often quite cold. The foot and leg became œdematous, and he complained of sharp pricking pain in a small circumscribed spot of the knee, as if a pin had been pricking him there.

Three days before his death, he was seized with violent and repeated shiverings, which had an extraordinarily great effect in reducing his strength; and from this time he rapidly sunk. Severe bilious vomiting, and a spasmodic affection resembling hiccup came on, which distressed him so much that he prayed for death in order to obtain relief. He succumbed on the 19th July, at one o'clock, P.M. retaining his intellect perfectly clear to the last.

The body was examined the following day, at noon, when it was found that his death had been occasioned by psoas abscess and disease about the gall-bladder.

The lower part of the omentum, where it dipped into the pelvis, was thickened, and of a red granulated appearance.

The gall-bladder had formed adhesions to the stomach and arch of the colon, and it also adhered firmly to the liver in all its upper surface. These adhesions appeared of long standing, particularly the latter; but acute inflammation had been recently going on in all these parts.

On carefully separating the colon from the gall-bladder, it was found that a corresponding ulceration had commenced in their peritoneal coats, at the part where they were united; which, had he lived a short time longer, would have opened a direct communication between them.

The gall-bladder contained a number of gall-stones, of an irregular roundish form and black colour, and of different

sizes, from that of a small grape to that of a millet-seed; and its inner coat was inflamed and eroded in several places by small ulcers, which had probably been occasioned by the irritating presence of the gall-stones.

The great body of the liver was rather of a pale colour, but quite sound, excepting in the immediate vicinity of the gall-bladder, where it was inflamed and indurated to some extent.

In the cæcum, superficial inflammation had been going on, and, besides being bound down by the several reflections of the peritoneum, preternatural adhesions were formed between it and the peritoneum lining the iliac cavity and loins; and on raising it up, to examine the anterior part of the lumbar region, its coat gave way about an inch and a half above the valve, having been previously nearly perforated by ulceration, in a similar way to that before noticed in the arch of the colon, shewing that a communication would soon have been effected between the canal of this intestine and the sac of the abscess behind it.

A purulent cavity occupied the place of the right psoæ muscles throughout their extent, from their origin to their insertion; and small remnants only of their muscular structure were to be observed, which were quite in a putrid and very fœtid state. The quadratus lumborum muscle formed the posterior wall of the abscess, and was but little affected.

The transverse processes of the two lower lumbar vertebræ, and a portion of the body of the lowest one, were denuded and rough, and of a black colour; and from the appearance of these parts altogether, it was conjectured that they had most probably been in a diseased state for many months.

On examining the site of the incision in the loins, it was found to be in the best direction towards the cavity of the abscess, and to have very nearly reached it: the quadratus lumborum muscle only intervened between them; and it is chiefly for the purpose of stating this circumstance, and of recommending the incision to be carried through this muscle in any future similar case, that I have brought the present one to the notice of the profession.

It is generally advised to allow psoas abscesses to point somewhere before any attempt be made to let out the matter; but, by so doing, it must be admitted that irrecoverable local mischief is often allowed to take place, and that the constitution is apt to become undetermined by the irritative fever which generally attends them.

The fatal nature of this disease, after it has made such progress, is so well known, that it evidently becomes our bounden duty to use our utmost endeavours to check the progress of destruction in the parts, as soon as we have reason to suppose that the inflammation will not admit of a cure by resolution, and that suppuration has commenced; and as the operation here recommended is simple, easy, and free from danger,—and certainly seems to hold out hopes of success, if had recourse to before the muscular structure becomes destroyed, and the vertebræ diseased,—I would earnestly advise that it should not be delayed an hour after the existence of the matter has been ascertained. It will be observed, that the opening in the abscess, as here proposed, will be in the most depending part of it, when the patient is placed upon his back, with the hips a little raised; and, in order to accelerate the healing process in the parts, injections might be used, and a degree of pressure made in the anterior part of the psoac region.

Had we succeeded, however, in reaching the cavity of the abscess in the present instance, at the time we made the incision, I do not think we should have had any chance of saving the life of our patient by it, as it appeared, on dissection, that the disease had already advanced too far to admit of its being of much avail; but it certainly would have been a satisfactory circumstance to us at the time to have got at the matter.

How long the disease had existed in L. C. V. is doubtful: some of his friends now state, that for many months previously to his being taken so ill, he used often to complain of pain in the right side of *his loins* after exercise, exactly in the situation of the abscess, which he considered as only indicative of disease of his liver; but I am inclined to think that psoas inflammation, *of the chronic species*, had begun long before the strain he got in the end of May; and that that accident only brought this (often) insidious affection into notice.

In regard to the admission of air into the cavity of deep-seated abscesses,—an

event which is so much dreaded by most surgeons, from its being considered as the cause of inflammation in the sac, or parts lining the abscess, and in hectic fever,—I do not know that the truth of this position is satisfactorily established. Its effect does not appear to be of a delcterious tendency in superficial abscesses: the inflammation which succeeds to the opening of them is of an adhesive and curative nature; and we know that fatal hectic fever forms (as it did in this case), independently of the access of air to the cavity of an existing abscess. It seems a good plan, however, to apply an exhausted cupping-glass over the orifice of some of the deep-seated abscesses when opened, for the purpose of emptying them more completely, and preventing the lodgment of irritating matter, and for bringing their sides into contact.

Your very obedient servant,
JNO. MURRAY, M.D.

ORDER OF THE ERUPTION OF THE FIRST TEETH.

To the Editor of the Medical Gazette.

SIR,

I SEE that Dr. Ashburner, in his excellent article upon Dentition, published in your journal, has, in accordance with the best written authorities, given the following as the normal order of eruption of the first teeth—

Two central lower incisors.
Two central upper incisors.
Two lateral *lower* incisors.
Two lateral upper incisors.
Four first molar teeth.
Two lower canine teeth.
Two upper canine teeth.
Four last molar teeth.

Now, sir, my attention was called to this subject a few years back, by a copy of the following table, given to a patient by the late Sir Richard Croft:—

Molars.		Canine.	Incisors.				Canine.	Molars.		
9	5	7	3	2	2	3	7	5	9	Upper Jaw.
10	6	8	4	1	1	4	8	6	10	Under Jaw.

This, it will be observed, differs from the usually-described normal order, inasmuch as that after the appearance of the central incisors, the teeth of the upper jaw always precede the corresponding teeth of the lower jaw. As this is a matter which may easily be proved by observation of the fact (to which, if it be fact, all authority must yield), I have only to add, that I have carefully watched the order of succession in at least fifty children, and from the very few exceptions I have met with, believe Dr. Croft's to be the real normal order of eruption.

Your obedient servant,
A GENERAL PRACTITIONER.

Nov. 8, 1833.

THE HYDROSTATIC TEST.

To the Editor of the Medical Gazette.

SIR,

THE following case, which proves that lungs which have never respired may yet float from putrefaction, and that such an occurrence forms no valid objection to the hydrostatic test, may perhaps be deemed by you of sufficient interest to entitle it to a place in your valuable journal.—I am, sir,

Your obedient servant,
EGERTON A. JENNINGS, F.L.S.
Surgeon to the Leamington C. B. Instit.

Leamington Spa, Nov. 4, 1833.

Floating of the Lungs of a still-born Child, from Putrefaction.

On the 26th of October last, a person walking on the banks of the Leam, observed a bag floating in the river: on taking it out of the water and opening it, a new-born female child was found therein. The body was in a putrid state; the abdomen of a dark-green colour, and distended with gas; the upper and back part of the head was dark coloured and emphysematous. From the circumstances under which the child was found, strong suspicions were entertained of its having been murdered. These suspicions were strengthened by the navel-

string having evidently been torn asunder and never tied; by the face being flattened, and by the existence of palpable marks of a cord having been tied tightly across the mouth, and also beneath the chin. To confirm or confute these suspicions became the duty of the medical inquirer; for in the event of his inability to solve the problem, public conjecture must have been left to explain the mystery as it best might.

I was desired, by Mr. Williams, the parish surgeon, to assist him in the investigation of the case, and the following were the observations we made upon the body.

1. The body was in a putrid state; the parts most affected with putrefaction were the head and abdomen—the latter was distended, the former was dark coloured, and beneath the scalp a considerable quantity of air could be felt. The cuticle in some parts was detached, and in all separable by the slightest friction.

2. The body weighed 6 lb. 1 oz. It measured 20 inches in length. The centre of the body was scarcely an inch above the umbilicus. The head was well covered with hair.

3. The cord, eight inches of which was left attached to the body, terminated irregularly, the umbilical vessels not being at their termination of the same length. No ligature had been placed upon it.

4. There was a deep groove, apparently produced by the pressure of a cord, extending across the mouth and right ear to the back of the head; a similar groove extended in front of the right ear, across the angle of the jaw and beneath the chin. The grooves could not be traced all round the head, so as to prove their continuity. There was no extravasation of blood in the cellular tissue beneath these grooves. The face was flattened and the nose compressed.

5. In the abdomen nothing remarkable was observed, except traces of putrefaction. The umbilical vein was distended with air. The liver was putrid, and crepitated when pressed between the fingers, or cut. It floated in water, even after several cuts had been made into it, but by slight pressure after these incisions had been made, the air was expelled and it sunk to the bottom of the vessel.

6. The cavity of the chest was small, and the diaphragm much arched. The lungs were of a dark chocolate colour; they occupied only the upper and back part of the chest, and did not cover the sides of the pericardium; they crepitated when pressed. Air was observed beneath the pleura, but instead of the air-cells being minute they were large; several of them not smaller than a pea. The air from several adjacent cells could be driven before the finger to one spot, so as to form one large blister. The lungs floated when placed in water with the head and large vessels attached. When separated, each lung floated; when cut into slices, each slice floated. The pieces of lung were placed in a strong cloth, and twisted with considerable force; after this pressure, which was not sufficient to destroy the texture of the organ, the lungs sunk.

7. The ductus arteriosus was considerably larger than either of the pulmonary arteries, of the same size throughout, and terminated by a large opening in the aorta. The foramen ovale was open.

From the observations (2) it was evident that the child was mature, and might have been born alive. That no regular midwife assisted at the birth, may be assumed from (3). That the child was not born alive, though the lungs floated in water, may be considered as proved by the small size and chocolate colour of the lungs (6); by the cells containing the air differing in size and character from the air-cells of the lungs (6); by the lungs ceasing to float after exposure to pressure (6); and by the proportion between the pulmonary arteries and arterial duct being that of fœtal life (7.) The extremely putrid state of the body (1 and 5) was the evident source from whence the air occasioning the buoyancy of the lungs was derived.

There was yet another point to be explained: what had occasioned the appearance of violence about the face? That evidently was produced by some cause subsequently to the death of the child. There being no extravasation of blood beneath the grooves (4), proved that those injuries could not have been inflicted during life. The cord with which the bag was secured was most likely to have produced them, it probably having passed round the child's head.

This case, though shewing that float-

ing of the lungs cannot alone be depended on as proving respiration, yet shews, that with due caution and observation, the floating of the lungs from putrefaetion may readily be distinguished from the floating of the same when occasioned by respiration.

TREATMENT OF COMPOUND FRACTURE OF THE LEG.

To the Editor of the Medical Gazette.

SIR,

THE following case of compound fracture of the leg may not be devoid of interest, as serving to illustrate the benefieial effeets likely to result from a method of treating accidents of that deseription, which may perhaps fairly lay claim to some degree of novelty.

James Porter, æt. 18, was admitted into the Neweastle Infirmary on the 9th of May, 1833, with a severe eompound fraeture of the right leg, in consequenee of a wheel having passed over it. The leg was erushed nearly flat, and exhibited a very extensive lacerated wound, reaehing nearly from the knee to the inner ankle. The tibia was exposed for several inehes, and to a eonsiderable extent was denuded of periosteum; a triangular pieee was so loose as to be removed from the limb without effort. It beeame a serious question to determine whether, with so severe and extensive an injury, an attempt eould with propriety be made to save the limb; but having just at the time eompleted an apparatus which I believed to offer peculiar advantages for the treatment of such an aeeident, I resolved to give it a trial. Those advantages eonsist in the leg being slung in an easy horizontal position, and the capability of dressing and eleaning it thoroughly and frequently, without any movement or disturbance whatever.

I aeeordingly plaeed the injured leg on the apparatus referred to, whieh admits of the knee and foot being rendered fixed points, while, by the aetion of a serew, the neeessary degree of extension to reduee the fracture is exerted and maintained. The widely-separated lips of the wound were then drawn together with adhesive straps, and other necessary dressings, and a many-tailed bandage was applied.

The lad had received some bruises on the abdomen, of whieh he complained much; a few leeches were applied, from whieh he derived relief; and a cooling plan of treatment was pursued. After the dressing he made scarcely any complaint of the leg. In three days the dressings were removed and replaced without disturbance, which was afterwards done regularly every seeond day. Very little swelling took plaee; but from so extensive and lacerated n wound the diseharge was neeessarily very great; nevertheless, the greatest cleanliness was easily observed, in consequence of the ease with which it was dressed. In a few days all eonstitutional disturbanee subsided; the wound began to eontract, and was only prevented from finally healing by a large portion of bone, whieh had died in consequence of being denuded of periosteum.

The proeess of exfoliation was necessarily slow, and required four months for its eompletion. At length a mass of bone was thrown off, measuring in length nearly two inehes, and with what was originally removed, four inches, and in one part eomprising almost the entire circumferenee of the tibia, but gradually shelving off to the surfaee towards the lower end. The eavity which remained gradually filled up, and at the end of six weeks the wound has entirely healed. The leg is without deformity, though the bone is somewhat broader in its renovated diameter, and the length is exactly preserved. The most remarkable feature in its appearance is the very extensive eieatrix left by the wound.

Without doubt I must look upon the termination of the ease as highly satisfaetory, when eonsidered as a test of the new deseription of apparatus employed. Without the advantage of perfect quietude, secured by the sling, and the horizontal attitude of the leg, and the unusual faeilities afforded for cleaning and dressing, I scareely think it possible that so serious an injury eould have been conducted to a safe eonelusion. A detailed deseription of the apparatus employed would take up too large a spaee in your valuable journal; but as it is my anxious desire that it should be inspeeted and tried in praetice by my professional brethren, I may be permitted to mention that it may be examined at Messrs.

Weiss's, in the Strand; and that a short explanatory description of it, illustrated with plates, has been lately published by Mr. Highley, in Fleet-street.

On inspection of the apparatus, it will be found, in addition to the peculiar facilities for dressing compound fractures of the leg, and for suspending it in an easy sling, to possess an arrangement for fractured femur, which I have used successfully, and which may not be unworthy of attention, more especially in its applicability to fractures in the upper third, or in the neck of the bone.—I remain, sir,

Your obedient servant,
T. M. GREENHOW.

Newcastle, Nov. 2, 1833.

FINANCIAL MANAGMENT OF SELF-SUPPORTING DISPENSARIES.

To the Editor of the Medical Gazette.

SIR,

I HAVE been applied to frequently by gentlemen and secretaries of self-supporting, charitable, and parochial Dispensaries, for information on the best manner of keeping their accounts, as well as of *combining* and *condensing* their annual statements.

Perhaps you will be kind enough to allow the following formula for the latter purpose to appear in an early number, as it will afford surgeons an opportunity of supplying secretaries with very useful information, and will assist the former in any preliminary calculations they may wish to make for their own districts.

Every person who is actuated by a fatherly regard for the health and happiness of the labouring people, by enabling them to redeem themselves progressively, peaceably, and unostentatiously, from parish bondage, and who is patriotically desirous of assisting government in strengthening the foundation of society, and constitutionally promoting the welfare of all classes; and every surgeon who is the friend of order and system (the want of which, by the by, amongst themselves it is that paralyses their power, weakens their influence, and lessens their hard-earned profits), cannot fail to observe, on attentively reading this outline of a yearly account of a Self-supporting Dispensary, that the foregoing advantages *may be obtained*, and that such a Dispensary may and will, in the progress of time, be the nucleus of most important statistical as well as medical tables. These tables have hitherto been made from inadequate sources of information: some have been too conjectural, or have been made at such an unreasonable sacrifice of time and money that very few have been able to undertake their construction. Some amongst us, even in the quiet retreat of a country town or manufacturing village, where such a Dispensary is established, may be enabled to verify and perfect the admirable and useful line of observation commenced by Mr. Thackrah, on the effect of manufactures, trades, &c. on life and health; others, again, on bastardy, the time of marriage, wages, agricultural and manufacturing employments, as they affect population; and laudably pass their leisure hours in instituting comparisons with other districts of the country and denser populations, on the effect that education, climate, soil, modes of living, pauperism, and crime, have on the moral and physical condition of each separate portion of the community.

Medical men have it in their power, in co-operation with the abused and vilified clergy, and other practically wise and good men with which the country abounds, to "win the affections" of the comparatively industrious among the common people, and neutralize the tendency to sedition and anarchy which is too general among the idle and vicious—idle and vicious because improvident;—improvident, because "beggary is made a better trade than the spade or the workshop."

These considerations, however important, are secondary to the formation of an institution that shall embrace, *at their own homes*, or at the Dispensary, as the case may be, *all the sick poor* of a district: and I further entertain the hope, that in a few years every county in the kingdom, commensurate with its population, will be supplied with District or Self-supporting Dispensaries (for the name is indifferent), on the combined principle of the *industrious poor* paying for themselves—the *patronized*

and genteel poor being paid for by honorary subscribers, and the *parish poor* by overseers of parishes. As the former are encouraged, the two latter classes will decrease. There will be a District Dispensary required for every locality having 8000 inhabitants in a circle of twenty-one miles; and every large town with 60,000 inhabitants should have two Dispensaries, and so on in proportion. Many counties will require twenty Dispensaries, and some even thirty or forty.

Then EVERY JUNIOR MEMBER of the Hall, or of the College, will find a clear stage—he may *fairly commence* his career, and exercise his dear-bought skill, without the sale of his patrimony, or the resorting to the mean and selfish arts which men have frequently been compelled to adopt on beginning practice. If ambitious of distinguishing himself as an operating surgeon, and really deserving the highest honours in the profession, in the progress of light and liberality there possibly may be a rule made at our county hospitals that the surgeons to those institutions shall be elected by the surgeons of the Dispensaries in each county, and who must be better judges than the Hall, the College, or the public, of the qualifications of any man to fill that high station. It is by these means only, which will make the profession more useful, and therefore more popular, that the *crisis* alluded to by the President at the Sheffield Meeting can be made a salutary one, and by which the character and respectability of our profession can be raised; and not by abusing gentlemen and governors for patronizing (as they are atrociously and falsely called in the Lancet) "*human slaughter-houses*," and whose statutes and regulations, after all, nine times out of ten, have been recommended to them by the prospectuses of medical men.

I have the honour to remain,

Your humble servant, &c.

H. L. SMITH.

Southam, Oct. 30, 1833.

The General Yearly Statement of the INCOME *and* EXPENDITURE *of the Self-supporting, Charitable, and Parochial Dispensary, for the District of* ——, *in* ——, *for* 1833.

INCOME.		£.
The overseers of the parish of (say Agricola), on behalf of their paupers, the total population being (at 2*l.* per 100)	2000	40
Ossifex, ditto	1400	28
Machinator, ditto	1600	32
Familicus, ditto	200	4
Obesus, ditto	2000	40
Carnivorus, ditto	500	10
Herbivorus, ditto	500	10
Despoticus, ditto	100	2
Democraticus, ditto	900	18
Servus, ditto	1600	32
Frigidus, ditto	3000	60
The subscriptions of free members* for the current year, from the parishes above-mentioned	—	300
Total Population . . .	12,900	576

EXPENDITURE.		£
To drugs, leeches, &c.		80
Paid the medical officers, for attendance at the Dispensary and journies, according to weekly account, as follows:—		
M. Salus . . .	£48 10 0	
R. Populi . . .	150 0 0	429
C. Suprema . .	170 0 0	
S. Lex	60 10 0	
		509

Examined and passed by
Visitors { "Virtus in
and
Auditors { Actione consistit."

* The proportion of free members in each parish, as well as the number of honorary subscribers, will, in some future statement, become matter for further observations: they are better fitted for a political than a medical journal.

Abstract of the Cash Account *of the Honorary Subscribers and Donors.*

	£.		£.
To annual subscriptions and donations	100	To one year's rent of Dispensary	10
To proceeds of sermons at the different parishes	40	To stationery, printing, &c.	27
Profits on a ball and Bazaar	90	To Secretary's and Dispenser's salaries	30
		To Collector's and Matron's salaries	40
		To wine, brandy, broth, linen	60
		To letters, sundries, &c.	5
		Coals and candles	10
£	230	£	175

MR. GUTHRIE'S REPLY

TO

MR. KEY'S STRICTURES ON HIS PAPER,

"ON SOME POINTS CONNECTED WITH THE ANATOMY AND SURGERY OF INGUINAL AND FEMORAL HERNIÆ."

To the Editor of the Medical Gazette.

Sir,

I am so hardened by the attacks of various kinds which some gentlemen from time to time have been pleased to make, that I desire the journals in which such things are contained may not be brought to me, and I rarely, therefore, read these articles unless by accident; they are thus deprived of their sting, as far as I am concerned, as I cannot possibly be displeased at that which I do not know. If I submit to the various imputations thus cast upon me, it is only because I will not give myself the trouble and uneasiness of thinking about, or of answering them.

The "Strictures" in your journal of the 9th instant, on my paper on Hernia, would have passed unnoticed, if Mr. Key had not attached his name to them. His general respectability, and more particularly his connexion with Sir A. Cooper, induces me to break through a resolution I have now some years formed, of never entering into a medical controversy, and particularly an angry one; and to request a place in your journal for my reply. The *preux* chevaliers of the bygone days were often in the habit before they entered into mortal combat, to salute each other, in order to shew that although their strife was deadly, it was dependent upon a point of honour, and not upon personal feeling and hatred.

Mr. Key, for the simple circumstance of my having differed in opinion with Sir Astley Cooper, in the most unassuming manner possible, as I shall shew in the sequel, has thought it right to treat me generally with great incivility; to call me an indolent superficial person, desirous of gilding his own reputation at the expense of his contemporaries; ignorant withal; and by implication not to be misunderstood; little better than a literary thief. Well indeed may the better classes of society say, we cannot put our sons into the profession of surgery; it is not one a gentleman can enter. When you have a difference, however trifling, your first letters are written in all those terms of violent abuse with which those of all other persons end. When will you surgeons become civilized beings, and learn that even a strong argument gains no support from personalities or abusive language? Let me hope that Mr. Key will pardon the liberty I take, in offering him my forgiveness for his incivility, and that he will join me in showing to the world, that the President of the Royal College of Surgeons, and a future aspirant for that honour, can break a lance on a difficult point in anatomy or surgery, with all the courtesy of gentlemen of the olden time.

Two hundred and fifty copies of my paper were printed, and of these, thirty-four only have been placed in the hands of the bookseller for sale; the rest I have given away, or reserved for a future purpose. In the introduction, dated 22d August, 1833, I have stated it had been written nearly two years, and that the press had been standing many months, in the hope that it might form

part of the first volume of the Transactions of the Royal College of Surgeons. It must therefore be considered as the lecture delivered in February 1831. My wish was, that it and all other papers should be read publicly in the theatre, before the Council and members, assembled in the same manner as for the delivery of the lectures, and that the Council should afterwards determine upon their merits. Disappointed in this hope, for reasons I cannot now enter into, I desired that the paper might be printed; but before I did so I sent it to Sir Astley Cooper, requesting he would have the goodness to read it, and to mark any passages he thought erroneous as regarded himself, or did not approve of, in order that they might be altered to his satisfaction. He kept the proof sheet three weeks, and returned it with an objection, written in his own hand on the upper part of the first page, to one passage only, viz. that at page 20, in which I say that bleeding in strangulated hernia "has been recommended by Sharp, Pott, B. Bell, Sabatier, Richter, Collésen, Scarpa, and Sir Astley Cooper, names which can never be surpassed in respectability; whilst Wilmer, Alanson, and others, have published against the practice." In the proof, Sir A. Cooper's name did not stand with the first party, but with Wilmer and Alanson, and to this he objected. I immediately altered it; but he wished that we should read over that part of his folio work together, in which he considered his opinion to be given the other way, which we did; and I told him that I had copied this passage precisely as it stood, from Mr. S. Cooper's Dictionary, for reasons I shall presently assign. I asked him if he had any other objection; he said he had not, and I of course had no farther alterations to make. Living on terms of friendship with Sir Astley Cooper, sitting at the same table fifty nights a year with the utmost harmony, and going home with him, Mr. Thomas, and Mr. Keate, in his carriage the same evenings, I felt it was due to him to submit to his perusal, previously to its being published, a paper on a subject which had been, and was still, peculiar to him; I felt it was only a proper compliment to ask his corrections and objections. I leave it to the decision of the profession, whether it was possible to pay a greater mark of friendly, nay, of respectful attention, to any man.

If I did shew myself ignorant of the then existing state of surgery on the subject in question, in my lectures, as Mr. Key states, it was not for want of good teaching, inasmuch as Sir Astley Cooper had done me the favour to instruct me, in the course of his examinations of some of the candidates for the diploma, and by sketching the parts on paper, according to his views of them, and lastly by dissecting them with me. It was either through wilfulness, or that obstinacy which induces a man to adhere to his own opinion when he thinks it right, in preference to following, like a parasite, the opinion of another which he believes to be less correct, that I chose to deviate from it. When I found I could not quite accord with the opinions I heard Sir Astley Cooper deliver, nor with the pen-and-ink sketches with which he supported them, I asked him to come and look at the parts I had prepared; and I had five male pelves on the table for demonstration, at a period, in February 1831, when even one was scarcely obtainable in London without great difficulty and expense. He appointed the hour, two o'clock, and, in the presence of Mr. Clift, senior and junior, Mr. Owen, and myself, he worked until near four upon the opposite side of the same subject, engraved plate 1. The dissection thus made was drawn by Mr. Clift, senior, and is engraved in plate 2, being the first figure. I did not then admit that it supported the statements made by Sir Astley Cooper in his work on the Testis, in which this subject is introduced, and I would not say it in the theatre. I do not admit it now; and if gentlemen choose to accuse me of ignorance because I will not teach what they believe, but which I do not, they are at liberty to do it, but I do not think with justice; they ought rather to accuse me of an obstinate adherence to what they think erroneous opinions. Lest, however, I should appear to have taken an undue advantage of an act of kindness, I thought it right to have Sir A. Cooper's own lithograph figure, contained in his own work on the Testis, copied, and it is given as figure 3, plate second, and with the letter-press explanation. But I do more—I give the *whole passage in the body of Sir A. Cooper's book, without the omission of a single word:* it occupies nearly all pages eight and nine; so that if I had intended to misrepresent, or rob Sir

Astley of his just claims, I have done it in so very extraordinary a manner, that there is not a dog that runs the streets that would not be able to perceive it, provided he could read.

I must beg the reader to pause, and ask himself, what man can do more to another, than to give every word he has said on the subject in question? I ask again, can any man wish for more in an inquiry, than to have *all* he has written distinctly laid before the judges? Is it possible that a man who acts in this way can be accused of not having referred to the original work of the author? I should have thought not, but Mr. Key, through inadvertence, has done it. I feel assured he will lose no time in retracting, in the strongest manner, the insulting expressions he has made use of towards me, particularly in the second column of the first page of his critique.

He has, in the first column, the following passage:—"Mr. Guthrie has announced that he takes the descriptions of the anatomy of the parts from Mr. Cooper's Surgical Dictionary, and proceeds to criticise them as if he were in full possession of the several authors' sentiments. He contents himself with the brief description given in the same work, as evidence of the exact state of science up to the period at which he commences his labours of discovery," &c. To this passage I have one serious objection; it is simply—*that I have never made such announcement, that I have never said the thing, nor done it.* I have said, "That it may not be considered I am combating a shadow, I shall first shew what are the opinions of some of the ablest anatomists who have written on these points, and then to develop my own." "Mr. S. Cooper, whose Surgical Dictionary may be justly consulted as a summary of the opinions of the principal surgeons of Europe, has given, in the last edition of his work of 1830, page 653, the following account, compiled with especial reference to the works of Sir A. Cooper, Messrs. Lawrence, Scarpa, Wesselback, Cloquet, and Langenbeck." I then proceed to give this summary, being Mr. Cooper's own opinion, containing Mr. Lawrence's, but which I did not adopt until I had twice read the latter gentleman's statement in his own work; and this summary is followed (the reader will be surprised to hear), by translations made by myself from the works of Cloquet and Blandin, with allusion to similar passages in particular pages of Velpeau, occupying three pages; which translations are not to be found in any other book in existence but my own. And this is followed by the whole of Sir Astley Cooper's original statement, to which I have alluded, making in all five pages of anatomical description, one-eighth of the whole of my paper, not one line of which is to be found in Mr. Cooper's Dictionary; and yet Mr. Key says that I have taken these descriptions from it. I will not charge Mr. Key with any thing more than a too vivid imagination, which has made him neglect the facts as they stand, in the ardour of his desire to punish me.

Having given the words of Cloquet, Blandin, and Sir A. Cooper, from their own works, I proceed to express my surprise at the great difference which exists between their different versions of the same thing; and then endeavour to convey my own views on the subject. Mr. Key seems to make small account of Jules Cloquet, but I will venture to assure the readers of this paper that his work on the Anatomy of Hernia is by far the most laborious work we have on the subject. He gives an account of the appearances of several hundred dissections, for the purpose of elucidating this subject; he describes the appearances observable in different varieties of structure; and it is to him we owe the first correct description in print of the cremaster muscle. In this part of my paper I have quoted his words, and with reference to the page in his book in which they are to be found. I have done the same by Breschet; and yet it is said I have copied this from Mr. Cooper, who does not say one word on the subject. The most extraordinary part of the whole of this misrepresentation is, that he says I am shy (page 196 of your journal) of consulting Sir A. Cooper's works, and rather trust to "reports" of his opinions; he therefore, for my information, and not of your readers, as he distinctly says, does me the favour of transcribing *part* of a description, the *whole* of which I have given at full length in the very words of Sir Astley, and not only the words, but the plate to boot. Surely Mr. Key could not have been in his right mind when he made this statement, or was careless of the result, provided he had the opportunity of offering

me an insult, which he must have known would be repelled, in a short week or two, to his own inevitable discomfiture.

I have not criticized Sir Astley Cooper's work in my paper; my warm regard for him prevented my even wishing to do so, and this letter proves it. I stated his opinions verbatim, and without reserve, and then placed my own in succession. The reader may collect from them that there is a difference of opinion, but it is not so stated; there is just hint sufficient to an anatomist to set him to work.

Mr. Key is exceedingly displeased with me because I have said that in 1831 it was the prevailing opinion of modern surgeons, that the parts through which an inguinal hernia passes or proceeds have little or nothing to do with the causes of strangulation. I am sorry he should be displeased, but I cannot help it: I am of the same opinion still, and may be a very obstinate person; but if my readers will consult the recollections they entertained on this subject in February 1831, when the lecture was delivered, (and my paper alludes to nothing written since that period), I suspect many —nay, most of them, will agree that they did hold such opinions.

Mr. Key (page 196, at the lower part of the second column) says, "Not, however, to disparage the labours of Mr. Guthrie, but to give him full credit for his discovery, let us see what addition he has made to our knowledge of the anatomy of this canal, and in what he differs from Sir Astley Cooper. After a careful perusal, I believe I discover that in his dissection he makes the muscular fibres of the transversalis pass in a more circular form under the spermatic cord, and around the lower margin of the upper abdominal opening;" and further on he says, "Perhaps Mr. Guthrie may have found the fibres more completely circular in his dissection for the College lecture than Sir Astley Cooper may have described them." I am sorry to be obliged again to differ with Mr. Key on the point of what I have really said in print; but I believe I have written exactly the reverse — that the fibres alluded to were not *circular* but *straight*.

In page 197, Mr. Key proceeds to misquote what I have written, page 19 of my paper, and then calmly says, "it is not quite clear,"—a fact which I admit, but it is because the sentence is his — not mine. He has inadvertently changed the word CIRCULAR into MUSCULAR, and made nonsense of it.

I take it for granted that Sir Astley Cooper's works on the subject are in every library, and as my paper cannot by any possibility be there also, I shall copy my statement:—

"Sir Astley Cooper first gave to the fascia the name of *fascia transversalis*, and drew attention to it in so marked a manner as to attract that of other anatomists. Jules Cloquet made it an object of particular study, and Blandin and Velpeau consider it to have been more accurately investigated by him, on which account I have transcribed his account of it, page 5. Cloquet says, that he had not seen Sir Astley Cooper's work, but had formed his ideas of it from that of Mr. Lawrence; and it appears to me, that he, Blandin, and Velpeau, have fallen into a misapprehension on the subject, common to many of our own countrymen, who have described that to be fascia transversalis alone, which is in reality the tendon or aponeurosis of the transversalis muscle implanted upon it; for without such misapprehension it is impossible to say that the spermatic cord always lies on the fascia transversalis in any part of its course after it has passed the superior opening of the inguinal canal, and has emerged from under the fleshy fibres of the transversalis muscle: nevertheless, this is said to be the case. The statement made by Cloquet, Blandin, and Velpeau, that the fascia transversalis arises from the inner edge of Poupart's ligament by a reflection upwards on that part, whilst Sir Astley Cooper describes it as passing beneath, to form the sheath of the femoral vessels, is another cause, I suspect, of the misunderstanding which has taken place. Cloquet, who wrote from very laborious observation, says, in a note at page 26 of his work, and in addition to the observations I have quoted, page 6, 'that very often the fascia transversalis is evidently formed of two aponeurotic layers, which are united on a level with the top of the crural arch. Of these the anterior comes from the arch itself (Poupart's ligament), the posterior being only a continuation of the fascia iliaca, which quits the iliac muscle to ascend upon the anterior wall of the abdomen. These two layers thus reunited proceed back to back between the transversalis muscle and the peritoneum. It

is easy to separate them on the outside of the superior opening of the inguinal canal, but on the inside and around it they are intimately united. When this formation is met with, the posterior layer passes usually behind the rectus muscle in its way to the linea alba, whilst the anterior one is continuous with the edge of the tendon of the rectus. The epigastric artery is sometimes posterior, sometimes anterior, and sometimes even between these two layers.' This description, which Cloquet gives as of an accidental occurrence, is, in my opinion, that which most frequently takes place; and if the fascia transversalis be said to be composed of two layers, the anterior being fibrous, the posterior cellular, much confusion will be avoided.

"The division which is made of the fascia transversalis into two parts, where it lines the wall of the abdomen, one being called external, the other internal, or anterior and posterior by Sir Astley Cooper, (but which are not the anterior and posterior layers of Cloquet,) the spermatic cord passing between them through an opening which is named the superior opening of the inguinal canal, is also a fertile source of inconvenience to the student, who will seek in vain for any such opening. If he is taught to consider the fascia transversalis as a sheet of condensed cellular membrane divisible in some parts into two layers, passing upwards from Poupart's ligament to fortify the peritoneum, he will readily understand it; and if he is shewn that at a certain spot it becomes much thinner, and allows the spermatic cord to pass through, he cannot fall into any misapprehension. This part is not, however, an opening; it is merely the thin portion of the fascia, which, as the testis escaped from the abdomen, was carried forward by that gland, and is now seen attaching itself to the spermatic cord. If this cord be drawn down, and an incision be made around it, close to where it is attached to the peritoneum, a sort of ring is formed, and if the finger be introduced, the thin part can be stretched or torn, until the firm internal edge of the denser anterior layer of fascia transversalis can be distinctly seen, having the epigastric artery a little to its inner side. The outer side of the ring is not so well marked, and the hole thus made by the finger is usually so large, and its outer edge so weak, as to occasion little fear of any great constriction being made by it on any portion of the contents of the abdomen which may be protruded through it. It is, therefore, not the part which constitutes the stricture at what is called the inner ring.

"When the peritoneum is carefully removed from the inside of the wall of the abdomen, by tearing through the cellular membrane which attaches the one to the other, the fibrous or anterior layer of fascia transversalis is not the part next brought into view, but a distinct layer of cellular structure resembling fascia, although oftentimes loaded with fat, which can be readily dissected off in a complete sheet, carrying with it the epigastric vessels which adhere rather to it than to the fibrous texture in front. This cellular layer I take to be the same thing as the posterior layer of Cloquet; but whether it is or not, it passes behind the rectus to meet its fellow from the opposite side, covers the iliac vessels below, and passes under Poupart's ligament, forming their cellular and adipose sheath and the septum which passes between them. When this cellular layer is turned down, (as in Plate III. fig. 1,) the fibrous fascia transversalis is brought into view. If an attempt is made to turn the latter down from the transversalis muscle, two inches above Poupart's ligament, it is often found to adhere very firmly to it and to its aponeurosis. When muscular at this part, many of the fibres seem to be implanted on it, although both muscle and aponeurosis are sometimes wanting, in which case only can the spermatic cord lie upon the fascia transversalis. When the tendons of the internal oblique and transversalis muscles are complete and well marked, and they and the fascia transversalis are traced inwards to the rectus muscle, the two tendons are seen to pass in front of it very distinctly; the fibrous layer of the fascia transversalis, on the contrary, divides, the anterior and thickest part is attached to the anterior edge of the rectus; the other, which is very thin, passes behind the rectus to meet its fellow from the opposite side; but at the lower part, close to the pubes, a portion of the fascia transversalis becomes very strong, and resembles, more than any thing else, a round white tendon going to be inserted into the pubes near its symphysis, and behind the rectus. The interspace formed

by the recedence of the two insertions is very distinct, the rectus filling it up*. The fascia transversalis passing externally from this sort of tendinous insertion, is attached to the inside of Gimbernat's ligament, of which it forms the internal layer, and is then continuous with the pelvic fascia. Passing from the upper edge of Gimbernat's ligament, or the third insertion of the external oblique muscle, to the inner edge of Poupart's ligament, or the second insertion of the same muscle, the fascia transversalis seems to adhere so strongly as to appear to be a reflection upwards from it, which is the view taken of it by the French anatomists; but if care be taken in making the dissection, it can with some difficulty be separated from it, and be shown to pass under the ligament to form the septum crurale, and the anterior part of the sheath of the femoral vessels. Exterior to the femoral artery, the fascia transversalis is firmly attached to Poupart's ligament, and is continuous with the iliac fascia.

"The transversalis muscle lies immediately upon the fascia transversalis. Its inferior edge is said to pass over the spermatic cord at the inner or superior opening of the ring, in order to form, with the internal oblique, the sheath of the rectus. This I believe to be in many instances an incorrect description. In the demonstration of these parts in the theatre of the Royal College of Surgeons, I had the opportunity of showing (see Plate I.) the transversalis muscle advancing fleshy or muscular until it reached the spermatic cord; a portion of it then took the usual course above and over it, whilst another portion passed below it, the terminating muscular fibres of which were inserted along the inner edge of Poupart's ligament up to the pubes. The muscularity of this insertion was admitted by the various teachers of anatomy and other competent judges who were present. The lower part of the abdomen was thus shown to be defended by a layer of muscular and tendinous fibres, lying upon the fibrous layer of the fascia transversalis; and the spermatic cord passed, not, as it is usually stated, under the inferior edge of the transversalis muscle, but through a split in it, originally formed for the purpose of giving passage to the testis. This split or opening was rounded on its under part, where the spermatic cord rested upon it, and formed a small opening essentially muscular in every direction, and much less in size than that which is described as the opening of the fascia transversalis, which adheres to the internal surface of the muscle*.

"It is this part, therefore, and not the fascia transversalis alone, which constitutes the inner or superior opening of the inguinal canal for all surgical purposes. The transversalis muscle does not, however, in the generality of instances, send its inferior portion forwards, and beneath the spermatic cord, in so marked a manner. This part of the muscle more frequently becomes tendinous and aponeurotic; but its fibres, although tendinous, are distinctly marked, running transversely in continuity with the fleshy fibres of the muscle, and are inseparably united to Poupart's ligament†. In some instances the muscular fibres of the transversalis do not take so oblique a direction from without inwards and downwards, but crossing more horizontally, send down a narrow tendon, on forming with the internal oblique the sheath of the rectus, which descends almost perpendicularly for some distance, to be inserted into the tuberosity or spine of the os pubis‡. The inferior or aponeurotic part of the transversalis may be equally present, forming the inferior edge of the inner opening of the inguinal canal; but this formation cannot take place if the spermatic cord passes immediately over Poupart's ligament, in which case this ligament forms the under part of the inner opening of the inguinal canal, the lower edge of the transversalis muscle the upper, and the fascia transversalis the sides. The epigastric artery runs within a few lines of distance from the internal edge of this part or opening; and between this vessel, on the outside, the edge of the rectus on the other, and Poupart's ligament below, as the base, the triangular space of Hesselbach is formed, through which that sort of hernia takes place, which is called *internal* by him, but *direct* by Sir Astley Cooper, to distinguish it from the more common one, which, passing through the inner or superior open-

* It is in the face of this that Mr. Key, p. 199, first column, charges me with being ignorant of the one insertion, whilst I have shewn two.

* The 1st variety.
† 2d variety.
‡ 3d variety.

ing of the ring, is called *external* by Hesselbach, and *oblique inguinal* hernia by Sir Astley Cooper.

"When the transversalis muscle is inserted broadly into Poupart's ligament by its superior fibres only, the anterior ones pass on to form the sheath of the rectus, and to be inserted into the tuberosity of the os pubis; but a layer of fibres internal to these (the folded fibres of Sir Astley Cooper*) are implanted on the fibrous external layer of the fascia transversalis, and curve downwards to be inserted into Poupart's ligament, or proceed, according to Breschet, to form what he calls the pretended ligament of Gimbernat, and which he will not admit to be a third insertion of the external oblique muscle. These fibres are depicted by Cloquet (Plate I. fig. 3.) as belonging to the fascia transversalis, and by Breschet (Plate III. fig. 1.), in his *Considérations et Observations Anatomiques et Pathologiques sur la Hernie Fémorale*, Paris 1819, as essentially going to form the internal layer of Gimbernat's ligament, of which the fascia lata of the thigh supplies the outer. They are very distinctly shewn in Plate III. fig. I., and certain other fibres running in a less curved and more vertical direction, belonging to the anterior or fibrous layer of the fascia transversalis, are equally well marked. These fortify this part in an especial manner, and something like the way in which the outer angle of the external ring is strengthened by fibres crossing in a similar manner.

"It may appear that I am laying claim to the discovery of the muscularity of the superior opening of the inguinal canal, after such a structure had been previously described by Sir Astley Cooper. I had not, however, seen his work at the time; and it was in consequence of my mentioning my ideas to him, that he made the dissection with Mr. Owen and myself, engraved in Plate II. fig. 1., to shew us his view of the subject. The opinion, that this opening is in many instances a muscular one, was, I believe, first advanced by myself, having always maintained that point since the year 1816, although I had not been able to give a demonstrative proof of it until the delivery of my lecture on the subject in the theatre of the College of Surgeons. There is, however, a difference between us, as to the manner in which the muscularity is effected. Sir Astley Cooper considers it to be accomplished by what he calls the folded fibres of the transversalis, that is, the internal layer of the fibres of the muscle which turn down inside the ring to be inserted into Poupart's ligament, according to Breschet as tendon of the transversalis going on to form the internal layer of Gimbernat's ligament, or according to Cloquet being inserted into his anterior layer of the fascia transversalis, as a part of which he has depicted them. According to my view of the matter, the ring, opening, or slit, cannot be rendered a complete muscular circle, by any muscular fibres which merely pass over and curve round to one side for insertion; one half, or at most two-thirds only, of a circle can be effected by such disposition of fibres; but if an inferior portion of transversalis muscle be admitted, and in the manner I have demonstrated it, then the circle is completed, and its muscularity is established, in all cases in which such a disposition of fibres exists. If I might venture to try to reconcile these views, I would do it by saying that the circular structure can only take place when the opening or ring is formed by a split in the muscle, or in it and its aponeurosis, and can only be shewn advantageously as a circle when the part has suffered a certain degree of distention, which brings it to that form; but even in that case there are no perfectly circular fibres, each apparently circular one being of necessity formed of two parts, one from the upper, and one from the under edge of the transversalis."

"If the hernia is of long standing, two great changes take place in the situation and even in the structure of the parts. The opening in the transversalis muscle becomes dilated and rounded. This change takes place principally in the superior fibres of the muscle, which instead of running obliquely downwards and inwards, become more curved, the convexity being upwards and inwards, and are of course brought so much nearer to the median line of the body, and to the pubes, which gives to the insertion of the muscle itself a peculiar curvature; which is rather the effect of derangement than the natural appearance of the part. If the under edge of the opening be muscular, it will of course yield in a similar manner; and circular

* Fourth variety.

fibres will then be seen, which are not, I believe, observable in the part in its normal state. The fibres of the transversalis which come from above and below, and meet a little beyond the lower part of the opening, which is itself rounded, to allow the spermatic cord to lie uninjured upon it even under pressure, represent rather the truncated apex of a triangle or split than a ring. As this opening is more used, and increases in size, it becomes rounder, approaches nearer to the pubes, and the second change takes place, viz. the edges lose their sharpness, become less defined, harder and more tendinous; so that in very old herniæ the muscle loses all power over them, and the ring or opening remains unaffected by its contraction."

The second and third varieties are those adopted by the French anatomists. I have given a figure, copied from Mr. Blandin. It is fig. 2. Plate II.; and the remarkable circumstance in it is, that he says—what Cloquet had said before him, in 1826, and Velpeau after him—that the fleshy fibres of the transversalis muscles run across to their insertion into the edge of the rectus, leaving all that part below—viz. between its lower edge and Poupart's ligament—to be filled up by the fascia transversalis. The engraving shews this in an indisputable manner. The difference between Mr. Key and the whole body of French anatomists is this: the French anatomists (and Cloquet, with his usual labour, has given many varieties) declare this to be the most common, and therefore give it as the normal state, considering all deviations from it as varieties. Mr. Key, on the other hand, seems to consider the normal state to be that, and that only, which Sir A. Cooper has described in 1830—viz. the fourth variety. Now the French anatomists are either honest and able men, or they are not. They have described what they have seen and believe to be true, or they have not. I believe they are both honest and able men; and if this is conceded (as I am sure it will be by every surgeon in England, not excepting Mr. Key), it must be admitted either that the French description of the course of the fibres of the transversalis muscle is, at least, very often correct, or that bodies of Frenchmen are not formed like those of Englishmen. Being persuaded that the latter opinion will not be entertained, it follows as a matter of course that the description Mr. Key maintains to be the correct one, and the correct one only, can after all be so but in an equal proportion with the other, inasmuch as the two nations are at least in equal numbers. The difference between the French anatomists and myself is, that admitting and believing the transversalis to take the course they describe, in as many instances as it does the course which Mr. Key declares to be the correct one, I venture to differ from them (I acknowledge with great deference, and some hesitation) as to the fact whether the fascia transversalis alone occupies all the remaining space they declare it to do in their descriptions and engravings. My dissections have led me to believe that there is a layer of aponeurotic structure passing from without inwards, descending also from the lower edge of the transversalis as a part of its formation, and inserted into Poupart's ligament; which aponeurotic layer can be readily separated, in many instances (although, from the tenuity of both parts, not in all), from the fascia transversalis; from which it is distinguishable, in strongly-marked subjects, by the direction of its fibres, and by the fact of its being distinctly inserted into the os pubis in front of the rectus muscle, whilst the fascia transversalis separates from it, to be inserted behind it. This is the tendinous expansion of which Mr. Key says, page 197, he is on so nice a point but an incompetent judge. I regret that he thinks so, because I am of opinion that there is no man, from his ability, his knowledge, and his situation, better qualified to decide upon so important a point. If the fact be as I have stated it, the description of the inguinal canal given by Sir A. Cooper is still a correct one, although not according to his own view of the matter.

Admitting the description given by Sir A. Cooper to be critically correct, there is still a point on which Mr. Key and I are at issue. Sir Astley says that the transversalis muscle "forms an arch over the spermatic cord, and is inserted with the tendon of the internal oblique muscle into the tendinous covering of the rectus, but the lower edge of the transversalis has a very peculiar insertion; which I have hinted at in my work on Hernia, (1804.) "It begins to

be fixed in Poupart's ligament, almost immediately below the commencement of the internal ring, and it continues to be inserted behind the spermatic cord into Poupart's ligament, as far as the attachment of the rectus. Thus the inguinal canal is endowed with muscular contraction, which, under the action of the abdominal muscles, serves to close it—to lessen the propensity to hernia. Sometimes a portion of muscle descends from the tendon of the transversalis, in the course of the linea semilunaris, to be inserted into the fascia transversalis, behind the cord, and into Poupart's ligament. It is this circular insertion of the transversalis which is the cause of stricture in inguinal hernia, in the course of the canal, and nearly at the upper ring."

In the letterpress accompanying the plate, he says—"Transversalis muscle, arising from Poupart's ligament, and passing around the spermatic cord at the internal ring, so that the fibres of this muscle appear behind as well as before the spermatic cord; and thus the inguinal canal is rendered a complete canal. This is a most important provision in preventing hernia; and when hernia exists, it is often the cause and the seat of stricture." I have already shewn that there is a difference of opinion on this point; for I have the misfortune to believe that the circular fibres thus specified do not exist in their natural state in the way they are described. This may be, in Mr. Key's opinion, the most consummate impudence possible, but his thinking or saying so will not settle the question to the satisfaction of even his best friends; he must, in order to convince, prove that it is so, by shewing the parts in their freshly dissected state, without any stretching or preparation, and in a body free from any herniary derangement. I doubt his being able to do so, and until he does, I hope he will allow me and others to doubt without being insulted:—it is but a small privilege for a British subject to enjoy. From having seen similar circular fibres in the same situation, which a careful investigation convinced me were merely condensed and reddened cellular membrane, I am led to believe that if they are ever muscular they are induced to take that form by distention from disease, which gives them a disposition they do not naturally possess.

The existence of the first variety is proved by my preparation in the museum of the College, of which I have given an engraving; and it is in the power of those anatomists who are desirous of satisfying themselves of the accuracy of the description, to examine and compare it with the original. They will find that the transversalis muscle in this variety, more effectively forms the wall of the abdomen, and closes it, than the fascia transversalis; and the statement made by Mr. Key, page 195—that "it is by means of this structure (the fascia transversalis) that the abdomen is closed"—is an error with reference to every instance in which the structure I have described exists.

I now proceed to femoral hernia, which occupies about four pages out of the thirty-seven of which my paper is composed; and Mr. Key is not more fortunate on this subject than the other. He is displeased with me, in inguinal hernia, because I have taken Mr. S. Cooper's summary, and in femoral hernia, because I found one elsewhere. I will now state why I have in two instances taken Mr. S. Cooper's summary, and why I did not do it in the third.

When I determined to take the subject of hernia for one of the four seasons I had the honour of being professor of anatomy and surgery to the College, I knew it was dangerous ground to tread upon; I knew it was like the heath of Roderick Dhu, every bush of which concealed a spear ready to bristle at a moment's notice. I therefore, like an old soldier, surveyed it closely, and prepared alike for attack and defence. I knew full well (and Mr. Key has proved the correctness of my foresight) that if I gave a summary, of my own writing, of the anatomical opinions commonly received in inguinal hernia, some of these dormant but impetuous spears would rise to the attack. I therefore selected the statement of a third party—of a gentleman, an old army friend, not particularly engaged in the subject, but whom I did believe to be well qualified to give a sound opinion. I thought they would not venture to charge the learned professor of surgery in the London University with ignorance, incapability, or misrepresentation, and I relied upon it that if they did, he would gird up his loins, and come forth to battle by my side. The result has justified my prudence; I have only been charged, not with having borrowed what

was bad, but with having borrowed too much. His statement of femoral hernia being very long, although very good, I ventured, unhappily for me, to give one of my own, in seventeen lines, as a text. I thought this all that was necessary, as I had nothing to object to but a slight inaccuracy of language, not of fact, in the description given by Sir Astley Cooper of the descent of a femoral hernia into the sheath of the femoral vessels; an inaccuracy about which he and I had frequently conversed, but which he would not admit: and to another inaccuracy on the part of the French anatomists of 1826, which I also tried to rectify. I may have failed in both; but of that the reader must judge. I endeavoured to do it in the most delicate manner possible, and I can only regret that it is considered otherwise by any one.

I beg leave to give the passages which have incurred Mr. Key's displeasure.

"Poupart's ligament, from its origin at the superior spinous process of the ilium to its insertion at the pubes, is extended over a space more or less filled up; and constitutes what is called the crural arch. From the ilium to the outside of the femoral artery, it is admitted that there is no possibility of a protrusion taking place. From this part the arch begins to spring, and terminates at the insertion of the ligament into the pubes. The outer portion of the arch is occupied by the femoral artery and vein which pass underneath it inclosed in a sheath formed by the two layers * of fascia transversalis described at page 13. A septum separates the artery from the vein, whilst another septem confines the vein on its inside, and separates it from the absorbents generally, and from any thing there may be in that situation, constituting all that I consider to be the true sheath of the vessels. There is however a space exceeding an inch, extending from the septum on the inside of the vein to the pubes where Poupart's ligament is inserted by its lower pillar, and by what is called its third insertion, or Gimbernat's ligament. This is occupied by a continuation of the fascia, forming a barrier nearly at a right angle with the septum or sheath on the inside of the vein, and is perforated, for the passage of the absorbents *. This is called by Cloquet septum crurale, being the barrier between the abdomen and the thigh, and when weakened and forced to descend before a hernia, it is called fascia propria by Sir Astley Cooper. This same part is also called the inner and superior opening of the crural canal by the German and French anatomists; the opening through the fascia lata of the thigh which gives passage to the vena saphena to join the femoral vein, being called the inferior and exterior opening of the same canal.

The French anatomists do not describe the anterior portion of the sheath of the vessels as formed by the fibrous layer † of fascia transversalis which passes under Poupart's ligament, the crural arch, or arcade crurale, for this purpose, but consider this sheath to arise from the ligament or arch, at its lower edge, and not in the manner I have noticed it; and although they describe very accurately the barrier which exists between the inside of the femoral vein and the pubes, they do not look upon it as a part of the sheath of the vessels.

The septum crurale, as Cloquet calls it, and which I think the best name for this barrier, is not a straight partition, but a curved one, being concave upwards or inwards towards the abdomen, and convex towards the thigh, so that by a little management in dissection it may be made to assume a funnel-like shape on the thigh, and to lead to the conclusion that any thing passing into it from within must follow the inclination which such a formation naturally gives, and of course be projected against the vein, by the side of which it would pass out at the lower opening of what the French anatomists call the crural canal; this does not however occur when a femoral hernia takes place. The inside of the septum crurale, or that part which is next the abdomen, is concave, and the oval hollow formed by it is partly

* The cellular and fibrous layers, one superimposed on the other.

* Mr. Key (page 199) asks, "If it be not the sheath for the absorbent vessels, what is it?" My answer is, when a fascia, stretched horizontally, or nearly so, across a part, is pierced by a set of vessels perpendicularly, that it is an inaccuracy of language, almost amounting to a perversity, to call it a sheath.

† It is in the face of this that Mr. Key charges me with ignorance of the structure of the sheath of the vessels. He first misstates, then reprehends, because by misstating he misunderstands me, and concludes by stating the same thing that I have done.

filled up by an absorbent gland, which is separated from the peritoneum by the cellular layer of fascia transversalis extended across from the edges of the hollow. It is in this concave septum, oval from side to side, that the hernial sac first passes; and it is this fact has made Sir Astley Cooper say, that a hernia is protruded into the sheath of the femoral vessels; but this manner of expressing it leads to the same misapprehension, in my opinion, as the French mode of describing it as protruding into the superior opening of the crural canal. They both imply or admit of its being supposed that the hernial or peritoneal sac passes down by the side of, and in direct contact with, the femoral vein, which is demonstrably an error in those who so understand it.

In all the dissections of femoral herniæ I have had an opportunity of making, the septum crurale of Cloquet, or the fascia propria of Sir Astley Cooper, formed a distinct sac, separated from the septum on the inside of the femoral vein by a mass of condensed cellular structure, sometimes more than half an inch in thickness; the septum had been elongated into an outer sac for the hernia, and had grown down by the side of the sheath of the vein. The hernial sac, or peritoneum, is not then projected into the sheath of the femoral vessels, but into a separate sac, which it forms for itself by the side of them. When the French anatomists say that the hernial sac is protruded into the superior opening of the crural canal, takes the course of that canal, and reappears at its lower opening, or where the vena saphena joins the femoral vein, it is only intelligible by understanding that the hernial sac lies in contact with the femoral vein, whereas it passes by the side of it, separated from it by two portions of sheath, viz. one formed by the septum on the inside of the vein, the other by the elongated part of the septum crurale, or fascia propria, which forms the outer sac. This lies on the pubic portion of the fascia lata of the thigh, and if it descends far enough, is found outside the opening for the passage of the vena saphena, but does not come through it from the inside.

"The hernial sac having descended below Poupart's ligament, carries before it the septum, or fascia propria, and now has above it Poupart's ligament, behind it the pubic portion of the fascia lata; to the pubic or inside, Gimbernat's ligament, to the outside the sheath of the femoral vein. Breschet considers Gimbernat's ligament to be erroneously described as a third insertion of the external oblique muscle, or as a part of Poupart's ligament; and supposes it to be formed behind by the transversalis tendon, and before by the fascia lata. The manner in which the transversalis sends down its fibres to form the posterior part, is shown in Plate III. fig. 1; but the part which the fascia lata has in forming the anterior part, does not appear to me to be sufficiently appreciated. The falciform process which lies over the femoral artery, and passes inwards to attach itself to Poupart's ligament, and to form the anterior part of Gimbernat's ligament, does more than this; it passes on, and is inserted also into the pubes, on a plane lower than the insertion of the inferior pillar of Poupart's ligament, so that, in fact, it forms an arch exterior to the septum crurale, which, when it is forced to descend, is compelled to pass under it; and it is this, and not Poupart's ligament, which causes the greatest compression on the hernia, and is the seat of external stricture. This portion of the fascia lata forms an arch in reality when a hernia is protruded underneath it; but in its natural state it is not the case; the absorbent vessels pass underneath it, and through the septum near the sheath of the femoral vein; but as the falciform process of the iliac fascia lata passes on to its insertion in the pubes, it rests on, and is attached to, the pubic portion of the fascia lata. This attachment, although not a very intimate one, is sufficient to confine the part; but sometimes it is so strong just at the pubes, and forms so firm and complete a union, that drawing on one part evidently influences the other, and renders the arch a circle, through which the hernia is protruded. The anterior part, or the iliac portion of the fascia lata attached to Poupart's ligament, being tendinous, and firmly stretched across from point to point, can yield but little; the inside, or Gimbernat's ligament, can hardly yield at all; indeed it appears to retain its sharpness unimpaired. The sheath of the femoral vessels is scarcely displaced, and the under part, or the pubic portion of the fascia lata covering the pectinalis muscle, seems to be the only part which can easily make room for

the hernia to be protruded. This it does by the separation of the attachment between it and the falciform process of the iliac fascia lata, and by the muscle beneath yeilding to the pressure.

"The structure thus described is of great importance in giving rise to stricture when any additional matter is forced into the hernial sac, and is much more frequently the cause of strangulation than has, I think, been hitherto supposed."

Mr. Key declares that the last anatomical description I have given will surprise the anatomists of the present day. I will, out of civility to him, admit that it may surprise some; but I cannot suppose it will surprise many; and as I have long demonstrated the structure in my usual winter course of lectures, I entertain a hope that if Mr. Key will take the trouble to examine the parts with my paper before him, he may be able, in some instances at least, to make himself acquainted with it.

I thus place my opinions before the public, on all occasions our judges; and in dismissing this subject, with the greatest respect for Mr. Key's talents and acknowledged ability, I can only say, that if there is any thing in my paper which has caused Sir Astley Cooper one unpleasant feeling, I regret I have written it. I have for him the most unfeigned regard; there is no man in England values his talents as an anatomist and a surgeon at a higher rate than I do. He has placed himself, by his ability and his industry, on the highest pinnacle of professional reputation. They have obtained for him, by universal consent, the highest honours.—With many thanks, I am, sir,

Your obedient servant,

G. J. GUTHRIE.

Berkely-street, Nov. 12, 1833.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Bridgewater Treatise: The Hand; its Mechanism and Vital Endowments, as evincing Design. By SIR CHARLES BELL, K.G. H.F.R.S.L. & E. Second Edition.

WE do not intend to enter upon the circumstances which led to the publication of the series of Bridgewater Treatises; our readers have doubtless become acquainted with them from other sources; nor do we feel disposed to discuss the question, which has been agitated by some of our cotemporaries, whether the subjects allotted to the different authors are the best that could have been selected by the distinguished individuals whose duty it was to execute the will of the reverend and noble testator. These things we gladly leave, in order to have more room to speak of the delightful work before us. The argument which it is the object of all the treatises to maintain, as stated in a note at the beginning of each volume, is "The power, the wisdom, and the goodness of God, as manifested in the creation;" and amongst the few topics which were suggested in the will, the "construction of the hand of man" is particularly mentioned. It is this circumstance, we make no doubt, which has led to the choice of the subject of the present treatise; and after perusing the volume, and seeing the fruitfulness of the source, we can find no reason to regret that the author's talents have been directed to it—nay, we conceive that, in reference to the important object for which the treatises have been composed, the selection has been a happy one. It tends to establish strikingly, that whatever part of the animal body we fix upon, however confined as a subject of investigation it may at first appear to be, discloses upon inquiry objects of the highest interest, and bearing a relation to the sublimest views of nature. It proves that the closest inspection of a minute portion of the animal frame raises the same sentiments of admiration for the "power, wisdom, and goodness of the Creator," as are excited by taking an extended survey of his works.

What strikes us principally in reading the whole of this volume, is the happy tone in which the author discusses the subjects contained in it, and the talent he possesses of imparting the same pleasant feeling and interest to the minds of his readers. This may, in a great measure, be traced to the diversified nature of the illustrations which the plan of his work has enabled him to present. The title of the treatise itself sets forth that it embraces the mechanism of the human hand, as well as its vital endowments; and these afford excellent opportunities for an ingenious writer to

bring forward a very striking variety of topics. But although there is great ingenuity and taste displayed in the selection of the illustrations, as adapted to general readers, there is also, it must be remarked, in the style of composition, much that contributes to the attractive character of the work.

The peculiarity of style to which we allude is derived, if we mistake not, from the habit of lecturing to which the author has so long devoted himself. Those who have had the pleasure of hearing Sir Charles Bell delivering his lectures on anatomy, must have admired the power which he had of investing even the driest subjects of anatomical detail with a seducing interest. His lectures upon the bones of the skeleton, for example—a subject which is pretty generally allowed to be the least inviting in the whole course of anatomy—were always remarkable for their interest to the student. Now, if we be permitted to speculate upon what gave this character to his mode of lecturing, we should say that it proceeded from the powerful conviction which always appeared uppermost in his mind, and was often expressed, that in every part of the animal frame—in the coarsest and strongest, as well as the most delicate structure—there is design and wisdom; and that these qualities will be the more abundantly manifested to every inquirer according to the pains taken to ascertain all the uses to which the parts are applied. This mode of regarding his subject, and this habit of closely surveying the human frame, and the success which the author has had in discovering the functions of some of the most obscure parts of the body, given up despairingly by others from their difficulty, has naturally produced a confidence in the principle which he has assumed, and we may even add, seems to have fixed in his mind a new and firm foundation for the investigation of anatomy. No author, we may affirm, has done more than Sir Charles Bell, to exhibit what great results may be obtained by taking the facts of anatomy as the ground-work of physiological reasoning; relying firmly on every minute part, whether it be a twig of nerve, an oblique direction of a muscular fibre, a tortuosity in the form of an artery, or an addition of a spine of bone, being adapted to some wise purpose in the economy. It is owing to his having carried this principle through the whole course of his investigations in the nervous system, that we would ascribe his success, more than to his experiments performed upon living animals; although in some works we see him designated by the supposed proud title of "experimentalist." His experiments have been few, and only confirmatory of deductions previously drawn from studying the course of nerves and the separate functions of those parts to which they tended; a proceeding which, we may observe, comes as strictly under Bacon's definition of induction, or "experience," as the most multiplied course of experiments can be said to do, although the adherents of the opposite opinion should even urge that philosophers advise that we should "torture nature," to make her disclose her secrets. The practice of combining the demonstration of the structure of the body with arguments of a physiological kind derived from it, so as to exhibit the uses of the part in the economy, at the same time that the structure is shewn, constitutes the great art of making a lecture attractive. It not only serves to impress the minute points of demonstration firmly on the mind of the student, and to produce a continued exercise of the judgment as well as of the memory, but it is of the highest benefit, on account of the solidity which it gives to the views of the lecturer. The hearer listens with increased interest, notwithstanding there be none of the arts of oratory—none of the tricks which belong to what is usually called eloquence.

We happened once, on leaving the lecture-room of the College of Surgeons, to hear an eminent scholar and divine, who had attended the lectures of Sir Charles Bell, remark to his friend,—"It is curious, that he appears while speaking, as if he were thinking aloud." This nearly expresses what we consider to be the peculiarity of the author's style. Instead of assuming the part of an advocate, who uses all his art in pleading his cause, throws all his mind into the endeavour to influence his hearers, addressing himself as much to the imagination as to the judgment, we find, on the contrary, that he rather puts himself before us as the philosopher, disclosing in simple language the successive steps by which his conclusion has been reached. Not being indifferent, but engaging with obvious pleasure in

the pursuit, he relies on the investigation being alike interesting to his hearers as to himself, and this very confidence serves to make others participate in his feelings of ardour. Putting a liberal trust, also, in the intelligence of his auditors, as well as in his own powers of clear and easy diction, he applies himself, without unnatural straining after effect, to the main object of his discourse. But to preserve the true, faithful record, of what has occurred to the mind, in a process of investigation, to express briefly, clearly, and perfectly—as it were directly from the suggestions of the mind itself,—the thoughts as they arise, and to omit nothing and add nothing, so as to present the whole in a genuine form, is the difficult part of the task. When accomplished, then even the least intelligent of those who hear will perceive that the links in the chain are entire, and they will receive delight.

We are led to make these remarks from recognizing, in the style of the treatise before us, a strong resemblance to the manner of the author's lecturing. There is the same close and rigorous method of examining the facts of anatomy, and deducing from them striking conclusions as to the design and adaptation of the particular structures. Sufficient attention is always paid to making these results obvious to the understanding of his readers; but a wise forbearance is shewn in the manner of applying them. He avoids to press his conclusions as far as they might easily be carried, preferring, when the argument has been conducted to a certain length, to leave something for the reader's own mind to fill up, rather than stating it, as it were officiously and needlessly. This tact or reserve is, we think, especially called for when a layman is required, by the nature of his subject, as in the present treatise, to make frequent reference to subjects purely religious. It has, however, a tendency to produce an abruptness in the method of dismissing one subject in order to pass on to another—an awkwardness of which this work presents several examples, which we should like to see removed by a little more care in the composition.

There is another circumstance which we have remarked, and may be allowed to refer to briefly. It is obvious, that when a writer has the art of combining any topic in a train of general reasoning, so that it becomes an argument in confirmation of what he attempts to prove, he invests this new subject with an additional interest, derived in part from the question that has to be solved. In this manner, subjects that appear scattered, may be indued with a common interest, and the author may descant freely upon the several topics without departing from his proper object of pursuit. We can observe a frequent recourse to this mode of giving variety and interest to the subjects. Now, although there is much danger of its leading to a too discursive style of writing, we think that it has been very legitimately used in this instance. Topics which would, doubtless, if they stood alone, be considered of trifling interest, obtain readily, when engrafted upon the discussion of important principles, an adventitious consequence, by contributing to the general result. We may offer an example of what we mean:—A considerable part of the treatise is occupied with illustrations of the correspondence which exists between the structure of the arm and hand in man, and the analogous organs for motion and prehension in other animals. Distinct notices are accordingly given of the anterior extremities of the monkey, bear, sloth, mole, bird, bat, horse, camel, elephant, lion, &c. &c.: these have assuredly a certain interest individually, on their own account, but they acquire their principal importance from affording such multiplied proofs of the truth of the leading principle—that one system of bones and muscles can be adapted to the different instincts and different states of existence of classes of animals so numerous and so various. Sir Charles Bell remarks:—"The wonder still is, that whether we examine this system in man, or in any of the inferior species of animals, nothing can be more curiously adjusted or appropriated; and we should be inclined to say, whatever instance occupied our thoughts for the time, that to this particular object the system had been framed."

The pursuit of the principle just stated, naturally leads to critical observations on the views of some zoologists, who carry it to an extravagant length, founding the theory of "elementary" parts upon it, and acknowledging no exceptions to the rule. This, by itself, forms another highly interesting object of inquiry; for it can be proved, by referring to some of the examples, and shewing

perfectly new forms introduced, that the law is modified by a more general one, of preserving a relation between the structure and the pecularities in the condition of the animal's existence. Combined, again, with this train of reflection, and suggested by the instances casually presented, we have other questions for discussion started and pursued; such as that interesting principle, so beautifully developed by Cuvier, that the individual parts of the body are formed in a just correspondence with the whole structure, and may denote even by the minute peculiarities of their forms, the general character of the animal. It is this principle, when applied to the explanation of fossil bones belonging to extinct species of animals, which gives a spirit and interest to what would otherwise be repulsive to general readers—the minute details of the structure of the bones. It is shewn that not only do all the bones composing the anterior extremity, from the shoulder to the finger, bear a reciprocal relation to each other, but that there is not even a roughness or spine for the attachment of a muscle, or a groove for the lodgment of a tendon, or a smooth surface for the articulation of a joint, which does not indicate, if scanned aright, the most curious conclusions as to the habits of the animal, and the scene in which it had its existence. "The mind of the inquirer is carried back not merely to the contemplation of animal structure, but by inference, from the system of animal organization to the structure of the globe itself." In another part the author thus refers to these fossil bones:—

"The bones thus exposed become naturally a subject of intense interest, and are unexpectedly connected with the inquiry in which we are engaged. Among other important conclusions, they lead to this—that there is not only a scheme or system of animal structure pervading all the classes of animals which inhabit the earth, but that the principle of this great plan of creation was in operation, and governed the formation of those animals which existed previous to the revolutions which the earth has undergone; that the excellence of form now seen in the skeleton of man was in the scheme of animal existence long previous to the formation of man, and before the surface of the earth was prepared for him, or suited to his constitution, structure, or capacities."

"In examining these bones of the ancient world, so regularly are they formed on the same principle which is evident in the animals now inhabiting the earth, that on observing their shape and the processes by which their muscles were attached, we can reduce the animals to which they belonged to their orders, genera, and species, with as much precision as if the recent bodies had been submitted to the eye of the anatomist. Not only can we demonstrate that their feet were adapted to the solid ground, or to the oozy bed of rivers, for speed, or for grasping and tearing; but, judging by these indications, of the habits of the animals, we acquire a knowledge of the condition of the earth during their period of existence—that it was suited, at one time, to the scaly tribe of the lacertæ, with languid motion; at another, to animals of higher organization, with more varied and lively habits; and finally, we learn that at any period previous to man's creation, the surface of the earth would have been unsuitable to him."

We are tempted to give a further extract, to shew how this subject may be pursued, so as to explain the phenomenon of distinct races of these animals being discovered in particular strata only—a circumstance which, taken together with some of the recently promulgated views concerning the development of animal life, has given rise to some curious theories. The subject is introduced by ingenious criticisms of the opinions of Buffon and of Cuvier, who profess, in their writings, to entertain sentiments of pity towards certain animals now living, which they consider to be miserably provided for existence, and whose congeners they would have us to look for, so much have they misunderstood the modes of life of these creatures, "in the ruins of the ancient world, among those animals which have been effaced, as failures, from the list of living beings."

"We have already hinted, that geologists have discovered, that in the stratified rocks there is proof of a regular succession of formations in the crust of the earth, and that animals of very different structure have been imbedded and are preserved in them. In the earlier formed strata, animals are found which are low, as we choose to express it, in the chain of existence; in higher strata, oviparous animals of great bulk, and of more complex structure, are discovered; above the strata containing these oviparous reptiles, there are found mammalia; and in the looser and more superficial stratum are the bones of the mastodon, megatherium, rhinoceros, ele-

phant, &c. We must add, that zoologists agree that man has been created last of all. Upon these facts a theory is raised, that there has been a succession of animals gradually increasing in the perfection of their structure; that the first impulse of nature was not sufficient to the production of the highest and most perfect; and that it was only in her mature efforts that mammalia were produced. We are led to this reflection: that the creation of a living animal, the bestowing of life on a corporeal frame, however simple the structure of that body, is of itself an act of creative power, so inconceivably great, that we have no title to presume that any change in the organization, such as the provision of bones and muscles, or the production of new organs of sense, is a higher effort of that power. We have a better guide in exploring the varieties of animated nature, when we acknowledge the manifest design with which all is accomplished: the adaptation of the animals, their size, their economy, their organs, and instruments to their condition. Whether we make the most superficial or most profound examination of animals, in their natural state, we shall find that the varieties are so balanced as to ensure the existence of all. This, we think, goes far to explain, first, why the remains of certain animals are found in certain strata, which imply a peculiar condition of the earth's surface; and, secondly, why these animals are found grouped together: for, as we may express it, if there had been an error in the grouping, there must have been a destruction of the whole, the balance necessary to their existence having been destroyed. We know very well that so minute a thing as a fly will produce millions, which, if not checked, will ere long darken the air, and render whole regions desolate: so that if the breeze does not carry them in due time into the desert, or into the ocean, the destruction will be most fearful. As in the present day every creature has its natural enemy, or is checked in production, sometimes by a limited supply of food, sometimes by disease, or by the influence of seasons, and as in the whole a balance is preserved, we may reasonably apply the same principle in explanation of the condition of things as they existed in the earlier stages of the world's progress. Certainly this view is borne out by what we have as yet discovered in the grouping of animals in the different stratifications or deposits of the earth. If the naturalist or geologist, exploring the rocks of secondary formation, should find animals of the class mollusca enclosed within them, it agrees with the preconceived notions, that only animals of their simple structure were in existence at the time of the subsidence of that matter of which the rock consists; but if the spine of a fish, or a jaw-bone, or a tooth, be discovered, he is much disturbed, because here is the indication of an animal having been at that time formed on a different type—on that plan which belongs to animals of a superior class. Whereas, on the supposition that animals are created with that relation to circumstances which we have just alluded to, it would only imply that certain animals, which had hitherto increased undisturbed, had arrived at a period when their numbers were to be limited; or that the condition of the elements and the abundance of food were now suited to the existence of a species of vertebrata. The principle, then, in the application of which we shall be borne out, is, that there is an adaptation—an established and universal relation—between the instincts, organization, and instruments of animals, on the one hand, and the elements in which they are to live, the position which they are to hold, and the means of obtaining food, on the other; and this holds good with respect to the animals which have existed, as well as those which now exist."

It is by thus connecting his subject with various questions of a general bearing, and identifying it with them, that the author contrives to preserve so lively an interest for the illustrations which he gives.

We regret that the length of these extracts, and our own remarks, precludes the possibility of our giving a just view of the contents of the last half of the treatise. This part is devoted almost entirely to the consideration of the vital endowments of the hand; and the application of the conclusions drawn from these to the principal argument—of shewing design—is even of a more interesting nature than the illustrations contained in the former part. Contemplating the hand as an organ of the senses, gives the author an opportunity to enter upon several novel and important views relating to the general sensibilities of the body. We must not omit to recommend to the attention of our readers the disquisition upon the sense of muscular action, as connected with the organ of touch; and also the comparison which is instituted, in illustration of the same subject, between the hand and the organ of vision, including the muscles of the eye and the various nerves of the orbit. It is in this latter part of the volume that there is the greatest originality; and the topics, some of which are of the profoundest nature, embracing criticisms of the opinions of our most celebrated philosophers, on points

strictly philosophical, but opposing themselves to his views, are always treated in an agreeable manner, and in language which is easily understood.

We cannot conclude the notice of this work, in which we have had so many opportunities of observing the elevated views and philosophical spirit with which anatomical subjects are treated, and of being reminded of the animated and impressive manner of the author, in lecturing, without expressing our deep regret that the present race of medical students are deprived of his services as a lecturer. Seeing one, possessed, as he is, of the highest qualifications for improving his favourite study, and extending the knowledge of important principles, withdrawn from a pursuit which he has cultivated during so many years of zealous and devoted labour, and when he has attained an acknowledged eminence in it, we are naturally led to reflect on the causes which induced him to retire from the teaching of anatomy. We do not think that a more important question could be agitated by the profession than the effects which are likely to result from the system of teaching medicine, which has recently come into operation in London. We see large public institutions rising up, supported by subscriptions, and capable, by combination, of bolstering up their teachers, instead of their being made, as in private schools, to depend for their success on the celebrity of the lecturers! and one obvious result is, to deprive us of the services of such men as Sir Charles Bell.

*** *We have this week been compelled to give half a sheet* EXTRA LIMITES, *for which, however, no addition is made to the price of the Journal.*

MEDICAL GAZETTE.

Saturday, November 16, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THOUGHTS ON MEDICAL REFORM.

ROYAL COMMISSION *versus* PARLIAMENTARY COMMITTEE.

IN our notice of the pamphlet of a "retired practitioner" last week, after having pointed out some of the opinions it advocated, in which we did not altogether agree, we remarked that it contained some views and suggestions which claimed every attention; and a deliberate reperusal of the brochure has induced us to complete the account of it, which our confined space then prevented. But first we would advert to the observation of a highly-intelligent correspondent, who, in a letter in our last number, (which we recommend to the perusal of those interested in medical reform), remarks, that while the other journals are distinctly conducted on *radical* principles, *we* are "more than suspected of party feeling, though of an anti-radical or conservative complexion." Now we shall not venture to say that we are entirely free from party bias; nor that, in our efforts to oppose opinions which we regard as injurious to the interests or respectability of the profession, we may not occasionally strain the argument to its fullest bearing. It would probably be very difficult to avoid this, without becoming lukewarm in the cause, and tame in its discussion. To the term "anti-radical" we make no objection, because we look upon radicals, in medical as in general politics, to be synonymous with *destructives;* and the parties to be made up, in both alike, of men broken in character and bankrupt in fortune, who are actuated by the consideration that they may possibly gain in the *melée*, if they can succeed in bringing matters to such an issue; while, for the best of all reasons, they can lose nothing, and therefore are reckless of the consequences. But whether we accept the appellation of "conservative" must depend much on the meaning which is attached to that expression. If it be implied that we would be "conservative" of any abuse, we must strongly deny the imputation; or even if it be meant that we should wish to see our medical institutions perpetuated on their present footing, then also must we de-

eline the term. We regard our three great professional institutions of physicians, surgeons, and apothecaries, as defective, inefficient, or corrupt; and few, we apprehend, would desire that the present excitement should subside without great, and, if we may venture to use the expression, *radical* changes being effected. The observation of "a retired practitioner" is but too true:—"It is a just though trite observation, that persons invested with privileges for the public good are apt to forget the conditions on which they were granted, and to act as if the prerogatives they enjoy were given to them for their own pleasure and advantage, and not for the use or benefit of the community. Governments are too much disposed to regard the delegated authority they hold as their inherent right, and where their interests or prejudices are at variance with those of their subjects, to employ the power they possess as an instrument of tyranny, instead of being a shield of protection to the governed." Herein is the root of much, if not of all the evil; and the observations made in the general, are lamentably applicable to our profession in particular.

We have three different governing bodies, each jealous of the other—each striving to preserve or extend its own particular privileges—each having boards for examining aspirants and granting licenses, the members of which but too obviously look upon the situation as one of emolument, and are therefore anxious to secure (honestly, no doubt, if possible) the greatest share of patronage, or rather of *custom*, to themselves.

With regard to the College of Physicians, we have so often expressed our opinion—that it was of the three corporations the most inefficient—that it can scarcely be necessary for us to reiterate our opinions. The College has been declining ever since licensing general practitioners was placed in the hands of the Society of Apothecaries; and unless it be renovated by some vigorous and wholesome measure, the race of physicians, such as it has formerly been, will *go out*, and we shall have in their place Edinburgh and other medical graduates practising as apothecaries. We suspect it is too late to talk of appointing a committee to revise the by-laws—at least, if they take as much time to do so as they have spent upon the yet unaccomplished object of making a new Pharmacopœia, they might as well leave it alone. A better plan would probably be, failing this, to repeal them altogether, or to send their charter to the government, with an intimation that it is wholly unsuited to the present times; and that, besides having lapsed into a mere University club, it was no longer of any service to themselves or to the public.

Of the College of Surgeons we had hoped much better things than we seem likely to receive from them. It is now many months since we published an abstract of a report presented to the Council by a committee appointed to inquire into what improvements might be made. That document comprised suggestions which, if acted upon, would have given a fresh impetus to British surgery—would have elevated the science, and raised the general character of its followers. What has become of that report? We hear nothing of it, or rather we hear that nothing is to come of it. Was it too disinterested in principle—too enlarged for the grasp of the Council? If so, it is time that a stronger arm should interpose, and those amendments be made for them, which they lack intelligence or public spirit to make for themselves.

The Society of Apothecaries is the least sinning of the three: they "have had greatness thrust upon them;" but, like Malvolio's, it sits upon them somewhat awkwardly. Their regulations, too, like his "cross gartering," are

somewhat overdone—somewhat too tight laced: they have aimed at too much; and it was scarcely to be expected that powers so extensive as they—we might almost say accidentally — obtained, should be allowed to continue without important modification. The double examination, for instance, at present required of pupils, at the College of Surgeons and Apothecaries' Hall, constitutes an incongruity, and is felt to be a grievance. The *general* practitioner—that is, one who is to practise medicine and surgery—ought to be licensed by a *general* Board, and the two ordeals blended into one; and which, we may add, ought to be conducted by persons holding the highest rank in their several departments.

Constituted as our public institutions at present are, and each having separate interests of its own to maintain, we can scarcely look for such unity and disinterestedness of purpose as our suggestions would imply; and we do not now expect that any thing satisfactory to the profession at large will be accomplished, without the interference of the government. Now this confession of faith is consistent with being "anti-radical," but whether it come under the description of "conservative," we leave it for others to decide. Our object is, not to preserve existing institutions as they at present are, but to keep all power from the hands of demagogues, whose only object is to destroy, that they may establish themselves in the place of others: as Wakley, for instance, tried to establish a college of his own—God save the mark!—upon the ruins of that in Lincoln's-inn Fields. Faulty as our institutions are, they are not so utterly despicable as they would become were such persons left "to lord it uncontrolled above their betters."

How the government might best interfere, is matter of question. The "retired practitioner" owns that "whether this be effected by the House of Commons or by a Royal Commission, much previous discussion is wanting, before those invested with authority to reform can have sufficient means of information to direct them, safely and wisely, in that difficult and important work." We regret, however, that he has not given an opinion regarding what mode ought to be preferred, for that is the first point to be determined. The bulk of the profession (so far as we have the means of ascertaining their opinions) are in favour of a parliamentary inquiry. On this point we have the misfortune to be at issue with them, and should prefer a Royal Commission, for various reasons, which we shall detail. And first we would endeavour to remove what we conceive to be an unfounded prejudice against this kind of investigation — namely, that it is obnoxious to jobbing, and liable to be composed of persons favourable to the abuses they are called upon to correct. This certainly is not borne out by the result of the commission in which our profession was indirectly concerned, appointed a few years ago to investigate the state of the Scotch Universities. Nothing of the kind could be more strictly impartial, or more rigidly attentive to the public interests; and the report constitutes such a model as we should like to see taken for imitation by any body of men delegated to inquire into the state of medicine.

The members of a Royal Commission, as it appears to us, are much less likely to be influenced by party feelings themselves, or deceived by partial witnesses; because they would, by visiting different institutions, have an opportunity of judging for themselves by personal investigation; and they are thus much more likely to come to correct conclusions than those who must necessarily be guided by evidence at second hand, and coming often from interested par-

ties. There are proportionally so few men of science among them, that it would unquestionably be very difficult to find, in the House of Parliament, a sufficient number of persons who were both qualified and willing to undertake the investigation; whereas the more extended field from which a Commission might be chosen would easily afford an adequate number of individuals, so unconnected with any party, and so well known for their general attainments, as would command the confidence of all; nor, from the circumstances alluded to, would their means of conducting the investigation be less remarkable for its superiority. It is true that, as a body, we derived great benefit from the result of the Anatomical Committee; but that was less a party question, as regarded our profession—for all agreed in anxiously desiring that something might be done, and in representing the necessity for legislative interference as of the most imperative description. But with respect to the questions which now agitate the medical body, the circumstances are very different: there are radical and conservative parties struggling against each other; nor can it reasonably be expected, considering how high party feeling at present runs in politics, that members of parliament should entirely divest themselves, on this particular question, of motives, which are so strongly manifested on others. It is very easy, on reading over the Minutes of the late Vaccine Committee, to perceive that the extremes of political feeling had each their representative, and that the questions put to the witnesses were in some instances intended to elicit an answer favourable to some particular view, rather than to elucidate the general subject. Neither, we confess, do we think that the recommendation that a Vaccine Board should be appointed, retaining the responsibility, but deprived of all emolument, is very encouraging, as to the feelings with which parliament would legislate on such subjects; at the same time it must be acknowledged that the suggestion, in this particular instance, probably arose from the offer stated by the reporter to have been made from another quarter, to have the duties performed gratuitously; — a striking illustration, by the way, of that jealousy among the higher powers in medicine, which tends so much to break our moral strength. We are, in fact, at present, like the bundle of dissevered rods, and devoutly do we wish that some strong and skilful hand would bind us together, and confer that power by union which we can never hope for in our present state. But to return: It is impossible not to be struck with the entire ignorance of the internal polity of our profession displayed by honourable members, when by accident a question involving any thing connected with us comes before them. There may be a few exceptions to this, but they are very few; and it is farther to be lamented that those who do seem at all acquainted with the subject belong chiefly to the radical party, and have imbibed their opinions from polluted sources. Again, several of those who have sat, and probably would again sit, on any committee relating to medicine, are proprietors of an institution, in the interests of which they have a direct and overwhelming concern—resulting, both from their feelings being engaged in the support of a protegé, and from still more objectionable considerations of a pecuniary nature. It is needless to do more, in illustration of the influence of this principle, than refer to the unblushing manner in which money subscribed for a totally different purpose was recently appropriated to the London University, without consulting those from whose pockets it was extracted. Undoubtedly the professional public would not be satisfied with an investigation conducted by men, any one of whom was a proprie-

tor of any institution whose interests were involved in the result. Yet we ask, if a parliamentary committee be appointed, will not such be the case? One of the great objects of the "retired practitioner" is to contend against "the spirit of monopoly." This is indeed a spirit so subtile, that it finds its way into the bosoms of all whose interests become involved in its maintenance; and we protest, that in none of the most corrupt of our old institutions does the grasping desire to produce an imposing effect by grandiloquent pretensions, or to secure what they can thus obtain by the strong bond of chartered and exclusive privilege, shine forth more conspicuously than in certain of the new establishments and their politico-mercantile supporters.

The author of the pamphlet before us, though he would apply his remedies with no sparing hand as regards the present system, is yet far from joining in the cry for equality, which constitutes the radical cant of the day, and which we shewed in a former article (Oct. 26) to be theoretically absurd, and practically impossible.

"If," says the Retired Practitioner, "the same education and attainments were required from all persons who applied for medical diplomas, one of two consequences must follow. If a long and expensive education were necessary for every medical degree, the number of graduates would be small, and the bulk of mankind would be compelled, in sickness and in suffering, to confide the care of their health to persons who had no certificate to produce of their fitness to practise physic, in which case, as far as the public is concerned, there might as well be no degrees at all. If, on the other hand, the standard of qualification were made so low as to admit a sufficient number of graduates to meet the demands of society for medical assistance, few physicians would be found thoroughly instructed in all the branches of knowledge necessary for the advancement of their profession;—medicine, whether considered as a liberal science, or as a practical art for the relief and cure of human sufferings, would improve slowly, if at all."

In the above we fully concur, and have only to add, that while we think the education required for the lower qualification is quite as high as it ought to be, that for the physician and surgeon is not high enough.

We are glad to perceive that our author advocates the propriety of a preliminary education, and this, we think, ought never to be lost sight of:—but our limits prevent us from entering into details on this point, as we wish to advert to another suggestion, which daily observation proves to be well founded, and to refer to an evil which strongly calls for redress:—

"There is still room for a third class of medical practitioners. No one will deny that those who prepare medical prescriptions ought to be versed in pharmacy; and that those who vend medicines in retail ought to know the proper doses and usual effects of the preparations they dispense. But, if this be admitted, it is clear that persons who undertake that branch of the medical profession, ought to have some definite course of education prescribed for them, and an opportunity afforded them of proving, by examination before a competent tribunal, that they are duly qualified to exercise the art which they profess. It is unnecessary to add, that the persons who prepare and vend medicines in retail are not bound at present to follow any course of study whatever, or to produce any test, however small, of their sufficiency; and that the public has, of course, no means of distinguishing those who understand their business from those who understand it not."

Now, suppose the divisions of the profession to be agreed upon, there still would remain to determine by what body diplomas or licenses should be granted. We agree with the "Retired Practitioner," that "it should be composed of persons removed as far as possible from the influence of local prejudice or private interest;" but we cannot con-

cur in thinking that this would be accomplished by entrusting teachers with the examination of their own pupils, nor that "regard to their own reputation, and a desire to maintain the character of the school to which they belonged, would prevent any Board of Examiners from granting undue facilities." We think on the contrary that the experience of Edinburgh with respect to graduates in physic, has demonstrated just the reverse of this position: we are not prepared to say how it might best be managed, but we are quite decided in our opinion as to how it ought not to be done. Perhaps a (not *the*) College of Physicians ought to be entrusted with the Medical department, a College of Surgeons with the Surgical, and a joint Board when the examination involved both branches of the art; or we might have an entirely independent Board, unconnected with either institution;—in short, whatever was most effectually removed "from the influence of local prejudice or private interest," would be the best.

There is much, very much room, for discussion on these subjects, and it is consolatory to find, that neither the distractions of politics, nor the pursuits of literature, have been able to abate the interest which "the Retired Practitioner" still takes in the concerns of the profession to which he once belonged; and although we do not go along with him in all his opinions, yet we have no hesitation in adding, that in giving the preference to a Royal Commission over a Parliamentary Committee, one advantage which we contemplate is the possibility of such persons as the accomplished author constituting one of its members.

COLLEGE OF PHYSICIANS.

We understand that a committee has been appointed to revise the by-laws, especially those which relate to admission into the fellowship.

ASSOCIATED LICENTIATES.

A deputation from this body had lately an interview with Lord Melbourne, to protest against any additional power being granted to the College of Physicians until they amended their by-laws. His Lordship informed them that no changes would be made involving medical concerns till after an official inquiry. Some of the deputation then expressed their hope that the investigation might be carried on by a Parliamentary Committee, with *Mr. Warburton* as chairman, but *could not extort any indication of acquiescence from the noble Secretary;* and their impression was, that he did not concur with their opinion.

COLLEGE OF SURGEONS—ENLARGEMENT of the BUILDING.

The Council of the College of Surgeons about a year ago purchased the house adjoining their building, and measures are now in progress for making extensive alterations and improvements in the Museum and Library. For this purpose several architects have been invited to send in plans; and we most earnestly hope that all jobbing—the vice of public bodies on such occasions—may be avoided. By the way, the College has no time to lose in "setting their house in order:" might they not contrive to do so in the figurative as well as in the literal acceptation of the words?

ADDRESSES

TO THE LATE MEDICAL OFFICERS OF THE ALDERSGATE-STREET DISPENSARY.

From Birmingham.

At a meeting of the medical profession in Birmingham, on the 12th inst. resolutions were passed, and an address agreed to, as follows:—

We, the undersigned physicians and surgeons of the town of Birmingham, beg you to receive the homage of our respect and sympathy, in addressing you on your spirited and independent conduct in resigning your offices in the Dispensary, rather than submit to regulations which you deemed inconsistent with the honour and dignity of the medical profession.

We cordially agree with you in the principle that such appointments to public charities should be free even from the sus-

picion of being bought or sold; and we trust that your virtuous example will be emulated by your professional brethren, in every town and county of the empire.

Accept, then, the expression of our warmest admiration, entitled, as we believe you are, to the thanks and approbation of the profession at large.

Signed by Dr. John Johnstone, F.R.S. Chairman of the meeting; Dr. Johnstone; and above 80 others, including all the most distinguished medical practitioners and lecturers in Birmingham.

From COLCHESTER.

WE can only find room to mention that an address, to the same effect as those already published, has been forwarded to us by the Colchester Medical Society. It is signed by Mr. Tomkin, the chairman of the meeting, and fourteen other medical gentlemen.

ROYAL COLLEGE OF SURGEONS IN LONDON.

To the Editor of the Medical Gazette.

8th November, 1833.

SIR,

BY desire of the President, I transmit to you the enclosed copy of a Circular to the Lecturers recognized by this College.

I am, sir,
Your most obedient servant,
EDM. BELFOUR, *Secretary.*

31st October, 1833.

SIR,

I AM directed by the Court of Examiners to acquaint you, that certificates of attendance on lectures have been offered to the Court, in order to entitle the candidates to examination for the diploma of this College, which certificates the Court are fully satisfied were obtained under false pretences.

I am further directed to request you will inform the students composing your class of the extreme dissatisfaction and regret with which the Court have made this discovery, and that you will assure them the Court will in future punish, with the utmost severity the law permits, all persons who may be implicated in a similar offence.—I am, sir,

Your most obedient humble servant,
EDM. BALFOUR, *Secretary.*

HYDROCYANIC ACID.

To the Editor of the Medical Gazette.

SIR,

BE pleased to correct an error which appears to have been committed in my note on hydrocyanic acid inserted in the Medical Gazette of last week. At page 209 the specific gravity is stated as being 922, instead of 992, which is the actual specific gravity of the acid referred to.

I remain, sir,
Your obedient servant,
H. GARDEN.

Oxford-street, Nov. 11, 1833.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Nov.* 12, 1833.

Abscess	1	Hooping-Cough	7
Age and Debility	22	Indigestion	1
Apoplexy	8	Inflammation	20
Asthma	1	Bowels & Stomach	12
Cancer	1	Brain	3
Childbirth	5	Lungs and Pleura	11
Consumption	51	Insanity	4
Convulsions	27	Liver, diseased	3
Croup	2	Measles	6
Dentition or Teething	6	Paralysis	3
Diarrhœa	1	Scrofula	1
Dropsy	17	Small-Pox	6
Dropsy on the Brain	10	Sore Throat and Quinsey	1
Dropsy on the Chest	2	Spasms	1
Erysipelas	1	Stricture	1
Fever	8	Thrush	2
Fever, Scarlet	12	Tumor	1
Fever, Typhus	3	Unknown Causes	3
Fistula	1		
Gout	1		
Hæmorrhage	2		
Hernia	1	Stillborn	16

Increase of Burials, as compared with the preceding week . . . 10

METEOROLOGICAL JOURNAL.

Nov. 1833.	THERMOMETER.		BAROMETER.	
Thursday . 7	from 36	to 47	29·82	to 29·68
Friday . . 8	29	48	29·64	29·80
Saturday . 9	31	49	29·87	29·99
Sunday . . 10	41	52	29·96	29·93
Monday . . 11	43	54	30·00	30·07
Tuesday . . 12	36	49	30·11	30·16
Wednesday 13	39	49	30·17	Stat.

Prevailing wind, S. W.

Except the 8th and 9th, cloudy; rain at times on the 7th and 11th; a dense fog during the 12th.

Rain fallen, ·875 of an inch.

NOTICES.

"A *Constant* Reader," were he consistent with his assumed title, should have known that we have repeatedly explained the point about which he inquires. We refer him, for his immediate satisfaction, to our last volume, p. 844; also to vol. ix. p. 981, and vol. x. p. 654.

ADDRESSES.—It having been suggested to us, that our declining to publish any more of these documents in the body of our journal, would create disappointment in parts of the country where our intention was not known at the time of their being forwarded to us, we have departed, in some measure, from our purpose this week; but shall in future be obliged to do as we have announced.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 23, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture VII.

MENSTRUATION.

Definition.—Every healthy woman, when not pregnant or suckling, is the subject of a peculiar discharge from the uterus, returning at stated intervals, and continuing to flow periodically, from the time of puberty until old age approaches.

Etymology.—In consequence of this appearance being about every 28 days, nearly agreeing in this respect with the time occupied by the revolution of the moon, the term *menstruation* was adopted. In every country and every age the name by which this singular phenomenon has been described, bears some reference to the period of its recurrence. In France, they designate it *les menstrués;* and *mois de femmes*, in reference to the month; also *les régles*, from the general regularity of its return. The Romans called it *menses;* and the Greeks καταμηνια. In England, we have preserved the Latin name, and call the flowing of the menses "the act of menstruation." Other terms have been used, and are still retained among the lower classes. In most of the old books, you will find it described as the *flowers* or the *courses* of the woman; these expressions, however, are now not tolerated in scientific and polite language.

Exceptions to the definition.—There are some exceptions to the definition I have given: it is said that some women never menstruate. Dr. Denman mentions having known two instances of this fact, in both of which cases the subjects married, and were barren. Some women, again, menstruate while suckling, more frequently, I believe, with a first child than afterwards. Married women, also, may pass over many years of their life free from this discharge, although in the enjoyment of perfect health, in consequence of its suspension during pregnancy and suckling. If, for instance, a woman fall with child immediately after she has weaned a former infant, and just before her menstrual period ought to have arrived, she will, according to nature's law, not menstruate again until after her lying-in, and the termination of her time of suckling: she may a second time be impregnated before menstruating, and in this way bring forth a number of children, without the discharge again appearing. Many cases of this kind are upon record, and a few in which conception occurred before the menses ever flowed. Thus Sir Everard Home has recorded the case of a girl who had three children before she menstruated once; Morgagni mentions a mother and daughter who were both parents before menstruating. La Motte speaks of similar cases, and Fodéré knew a woman who had menstruated but once, and that in her 17th year, although enjoying good health, the mother of several children, and 35 years old.

Alleged national exemption from the menses.—The women of Brazil, and other native Americans, have been said by some travellers to be exempt from menstruation; but this is certainly not the fact, and the remark originated in the circumstance of the women, though almost entirely naked, never having been observed menstruating. The truth is, that during the continuance of their menstrual period, they are considered unclean, are not associated with, and never allow a male even of their own nation, much less an European, to come within their sight. Boerhaave was certainly led into error when he assures us,

that there are whole nations whose women are destitute of the catamenia.

Supposed liability of other species to menstruation.—The females of other species have been described by different naturalists as being subject to regular menstruation. Buffon certainly entertained this idea, contrary to the opinion of Pliny, who considered woman as the only menstruating animal. Modern physiologists are unanimous in adopting the opinion of Pliny. Blumenbach in some degree explains the cause of this contradiction, when he says—"I know, indeed, that the same discharge has been ascribed to other animals, particularly those of the order Quadrumana. I have carefully inquired concerning all the female monkeys which I have seen exhibited for the last twenty years, and have found some of them liable to uterine hæmorrhage, which observed no period, and was regarded by the more intelligent keepers as a circumstance arising from disease; although they acknowledged that in order to excite the admiration of their visitors they often represented it as true menstruation."

Influence on the general health.—Women watch most anxiously the proper performance of this function, supposing that it powerfully influences the health of the individual, and erroneously attribute almost all the diseases to which they are peculiarly subject, to an irregularity in its appearance, considering that as the cause which indeed is only an effect. It is certainly true that the regular appearance of the menses may be considered a mark of general as well as uterine health, and any great deviation from the ordinary course a symptom of disease, either general or local.

Keeping this circumstance in mind, it is advisable sometimes to inquire of our female patients whether this function is properly performed;—but in addressing a woman on the subject, the height of civilization to which we have arrived requires that we should have recourse to some indirect method of obtaining the desired information, and use some softened expression, the import of which, although generally bearing a very different signification, is universally understood by females in the sense we wish to convey. Thus we inquire, "whether she is regular;"—"how long it is since she was last unwell;"—carefully avoiding such a word as menstruation, or any other direct term. Although, however, in familiar language, we say that a woman is "unwell," when under the state of menstruation, you must not suppose that this discharge is the consequence of any diseased action; on the contrary, it is the surest sign of a healthy state of the uterine system; and the expression has crept into use merely because in most constitutions it is attended with feelings of languor and uneasiness, such as are generally the accompaniments of a slight state of indisposition; while, in some, at each return it brings with it considerable suffering.

We shall now proceed to the consideration of the symptoms attending the first appearance of the menses; and afterwards endeavour to select, from the numerous opinions which have been hazarded on the subject, that theory most agreeable to the present refined state of physiology.

Symptoms.—At the time of puberty, great and analogous changes are effected in the constitution and appearance of persons of each sex. Until that age, all the powers of life are required for perfecting and bringing to maturity the growing animal, and we may readily believe that the increasing size of the body expends the supply immediately on its being furnished; but as soon as the person has reached its natural stature, so that there becomes no necessity for an increase of growth, a surplus of means is afforded over the expenditure, which is laid up for the purpose of continuing the species. This critical period in the male is characterized by the appearance of the beard upon the chin and upper lip; by the face becoming longer, and the features more manly; by the voice, which before was shrill, acquiring a deeper tone. At the same time, hair sprouts upon the pubes;—the testicles become evolved, both in their structure, as well as in consequence of the larger quantity of blood determined to the gland for the formation of its proper secretion;—the penis is also observed to grow more rapidly than before;—erratic pains are frequently felt throughout the limbs, more frequently still within the pelvis, and in the body of the testes. A new life seems suddenly entered upon;—new ideas take the place of those formerly entertained in the mind, and the fears of childhood give way to manly fortitude and a contempt of danger. Female society, hitherto disregarded, is now discovered to be enriched with the most alluring charms; and desires, before unknown, rage with a violence requiring much self-command to subdue. These phenomena are first remarked about the sixteenth year.

The female body arrives at maturity in every climate earlier than that of the male, and in this country generally between the fourteenth and the sixteenth year. In women, the first symptoms of the menses principally indicate the arrival of puberty. Changes also take place, and new feelings arise, in some degree similar to those experienced by the male at the same period. The uterine system is more particularly affected, and with it the whole frame sympathizes. The mons veneris and labia externa become evolved, and covered with

hair;—the clitoris enlarged;—the vagina both lengthened and widened;—the os uteri more prominent, and altered somewhat as to figure;—the uterus itself considerably increased in size;—the ovaries more fully developed;—the ligaments expanded;—the fallopian tubes elongated, and their fringed extremities more distinct and spreading. In the general system, the pelvis becomes more capacious, and the hips rounder;—the neck more graceful and slender;—the bust fuller;—the breasts considerably plumper, with the nipple redder and more prominent;—the eye more expressive and sparkling;—and the whole form more womanly. The different gestures of the body are performed with a degree of elegance not before noticed;—a sense of bashfulness succeeds to the previous romping character;—childish amusements are discarded;—the imaginative powers are suddenly unfolded;—the conversation bears a more agreeable and lively tone;—personal appearance engrosses much of the attention;—and the wish to please becomes a study.

From the time, indeed, when these indications declare that the epoch of puberty has arrived, and announce the woman in a fit state for the exercise of her sexual functions, the generative system calls into action a new impulse, which controls her whole nature, and impresses her with the most prominent traits of her physical and moral character. From this influence emanate all the strongest female passions—all the most lively affections;—to it may be attributed most of the nervous disorders—the fears—the anxieties—the caprices—the strange admixture of fortitude and dread—the calmness in misfortune, and endurance under suffering—which form such forcible contrasts with the disposition of the man. It is this that "constantly recals the woman to her sex," and stamps her whole existence with so characteristic a distinction. And there can be no question, that after the organs which characterize these amiable and sensitive beings are fully endowed with all their vital energies, woman is constantly subservient to their power, until the period arrives when she is no longer capable of extending the species;—when, having passed through the stages of infancy, childhood, and maturity, she enjoys quietly her individual life, during the remainder of which she is destined to differ comparatively little from the other sex.

Influence on the nervous system.—It is not surprising that derangements and irregularities wait upon a cause of such extensive influence; and we accordingly find that, when the excitability of the organs is more intense than natural, irritation ensues, which is propagated by sympathy to other parts, and thus morbid actions are set up, both locally and generally. This irritation, in an extreme degree, constitutes *furor uterinus;* more frequently, however, the increased susceptibility of the sexual organs does not reach such an extent, but induces an anomalous train of spasmodic and nervous symptoms, constituting what are called *hysterical disorders*, and apparently depending on the artificial and forced state of celibacy. These affections mostly disappear on marriage, which re-establishes the balance of the various functions, by giving its natural employment to an organ whose excessive sensibility had deranged the whole system. Numerous other phenomena may be referred to the same cause; and in those works which treat of the diseases incident to a life of singleness, we are presented with alarming statements. Haller, in his Elements of Physiology, concludes a long catalogue, by observing, that widows in particular are very subject to chlorosis, hysteria, convulsions, mania, and furor uterinus; and he states, that in inspecting the bodies of such subjects, he has found frequently a schirrous or steatomatous state of the uterus and ovarian dropsics. "Quare," he adds, "nisi morum custodia vetuerit, ea mala pleraque, et furor uterinus, et vera mania veneris usu solvuntur."

Premonitory symptoms.—Some peculiar symptoms appear, in most instances, indicative of the first approach of the menstrual period; in many females, indeed, these are scarcely perceptible; in others, they occur in such an inveterate degree as to call imperiously for relief by medicine. In general, they are more severe in the first than during succeeding periods; they are the same as those produced by uterine irritation from every cause, and are what are popularly termed *hysterical affections.* The patient feels herself slightly indisposed, with a little fever and considerable listlessness; she loses her appetite, and is sensible of her health suffering; at the same time the breath becomes more or less fœtid; the eyes dull; the face either pale, with a bluish semicircular mark beneath the lower lid, or flushed and bloated; and pains are frequently felt in the head, either constant or intermitting. These are attended with some pain and fulness of the bosom, with spasmodic pains in the loins and thighs, and a heat and irritation in the external parts and vagina; a degree of relaxation of the genital organs ensues; and a discharge, at first perfectly serous, or very slightly tinged with red, proceeds. Dr. Blundell thinks that the uterine organ itself becomes in some degree increased in bulk during the menstrual action. The discharge need not necessarily be at first coloured; and this circumstance is worthy of attention; for, as

Dewees observes, it will serve to explain those cases of impregnation which are said to have taken place previously to the eruption of the menses. On the first appearance of the discharge all the symptoms are mitigated, and, when well established, entirely cease. The character of the fluid becomes altered, from being perfectly pellucid, to its natural and healthy colour; but it is seldom till three or four periods have passed that the menses recur properly and regularly.

Occasionally unaccompanied by previous symptoms.—Some girls begin to menstruate without any previous pain or indisposition, and before they are aware of the changes necessary to be wrought in their constitution, when they suddenly emerge from the girlish estate to that of womanhood. Such an occurrence is certainly rare; but much unnecessary alarm, which it is well to guard against, may be excited in their minds by the unusual appearance of what is thought blood upon their linen.

Impossibility of the menses continuing during pregnancy.—Such is the general character manifested on the first appearance of the menses; and the discharge, usually preceded by similar symptoms, is destined to recur at certain intervals, except when suspended by pregnancy, suckling, or disease.

It is a popular idea, that some women menstruate during the whole period of utero-gestation; even good physiologists and physicians of discernment have adopted the same erroneous opinion. But such a circumstance is perfectly impossible; for we shall hereafter see, that upon impregnation taking place the uterus becomes lined with a membrane, secreted from its internal surface, which completely closes the orifices of the vessels from which the menses flow. It is certainly true that some pregnant women are subject to occasional attacks of hæmorrhage, both from the uterus and vagina, which may last three or four days. This blood has been mistaken for the menstruous fluid; but it is unlike the menses, inasmuch as it does not return at regular intervals. Although it is impossible for this secretion to continue throughout the whole of pregnancy, the same remark does not hold good with regard to the few early weeks. Dewees observes, he is persuaded that women may menstruate till the end of the fourth month, and he supposes the secretion in such a case proceeds from the cervix uteri, which before that time is not developed. Blundell says, he has repeatedly met with cases in which the catamenia flowed for the first two or three months. Many other practitioners have noticed the same; and I have a patient myself who always menstruates once after having conceived, to her proper time, though very sparingly.

Continuance during lactation.—Some women, as previously observed, are liable to menstruate during suckling, but this must not be considered a mark of strong health; it is a deviation from a natural law, and an irregularity of function. It is almost universally remarked, that the milk of a menstruating nurse is neither nutritious enough, nor supplied in sufficient quantity, for the infant's wants. In selecting a hired wet-nurse, therefore, we should reject a person who "is regular."

Suspension under acute diseases.—Menstruation is mostly suspended under acute fevers and inflammations;—in phthisis pulmonalis and other chronic diseases, where complete exhaustion of all the vital powers precede dissolution, its cessation is one of the worst symptoms we can observe: it almost always indicates that a fatal termination is not very far distant.

Suspension from local causes.—Local diseases, also, of the uterine system, but especially of the ovaries, may produce an interruption. It is worthy of remark, that one ovary may be diseased to a considerable extent, and yet the subject menstruates, and may bear children; but if both these bodies are implicated, menstruation ceases, and barrenness is likewise the result—a fact proving that one healthy ovary alone is sufficient for the purpose of conception.

In some cases of suspension, a vicarious discharge appears either from the nose, ears, anus, or some other secreting membrane; this discharge is blood, poured out by ruptured vessels, and seems destined to afford relief to a congested part; for it chiefly happens that previously to such an evacuation a sensation of pain or uneasiness is experienced in the particular organ from which the blood proceeds. This is only to be accounted for by some peculiarity of action, and by the sympathy so strongly existing between the uterus and every other part of the body. At the time, also, when the menses ought to appear, ulcers on the surface, which before were dry, have been observed to bleed, or become bedewed with moisture.

Influence of climate on puberty.—There is a great difference observable in the time at which girls, living in distant countries, first become the subject of the menstrual discharge; and this difference depends principally on climate. In Asia and the Indies the age of puberty has arrived before the tenth year; in Lapland and the northern regions, women do not menstruate until on the verge of twenty, and even then in small quantities, and, as Linnæus affirms, only in the summer. In this country, which is considered a temperate climate, the menstrual discharge first appears between the twelfth and the sixteenth year. It is remarkable, also, that those subjects who be-

gin to menstruate early in life, generally cease proportionally early: thus in the eastern nations the discharge has totally subsided by the age of thirty-five.

Mr. Roberton, of Manchester, indeed, in a very excellent and learned paper, lately published, has endeavoured to disprove the idea so universally entertained regarding the early appearance of the menses in the warm, and their late appearance in cold climates. To substantiate his opinion, he quotes Crawfurd's Indian Archipelago, and Raffles's Java, for the first; and Franklin, Lyon, Humboldt, Hearne's Journey to the Northern Ocean, Clarke's Scandinavia, Tooke's Russia, and Lessep's Kamschatka, for the second position. He infers from reference to these authors, that the crisis of female puberty arrives in all countries nearly at the same age. I cannot help thinking, however, that what has gained credence for so many centuries, especially when the question could have been so easily settled, must be based on solid observation, not the result of mere speculation and hypothesis.

Influence of constitution, &c. on the period of puberty.—Besides climate, the early or late appearance of the menses depends much upon the constitution, the mode of life, and the manners of those with whom the girl associates. Young women of a relaxed fibre generally menstruate sooner than those of a more hardy and robust habit. Those leading a city life, partaking of all the indulgences which luxury can afford, and spending the principal part of their time in confined and heated apartments, become more early the subjects of this discharge than others breathing the fresh country air, and in the enjoyment of daily healthy exercise. But the same circumstance is especially to be remarked respecting the morals of those with whom young girls converse: the indulging in lascivious ideas, and associating with women of loose character, seldom fails to cause a more early appearance than would happen to the individual if her companions had been properly selected.

Quantity lost at each period.—The quantity lost at each period has been variously estimated by different authors. Perhaps this discrepancy may be accounted for, partly by its being difficult to collect sufficient of the fluid to give an idea of the general quantity, and partly by the influence of different climates upon the quantity itself. In the tropical regions the discharge is considerably more profuse than in cold climates; and the same circumstances which affect the early or late appearance, regulate also, in some degree, the quantity. It varies much, however, in different women of the same country, and the same woman at different periods; yet a medium average may be given as the most common.

In the Islands of the Archipelago, for example, Hippocrates states that the women lost twenty ounces at each period; in Lapland, Linnæus averages the quantity at half an ounce; in this country it is about five ounces. Thus, then, we perceive there is a gradual diminution in proportion as the country is situated nearer to the north. On this subject Dr. Denman has remarked, that the menses bear some analogy to the productions of the vegetable world, appearing earlier, and being most exuberant, in the warm countries, where vegetation is luxuriant; late and scanty in those whose climate is unpropitious to the ripening of fruits. Thus, also, if a woman live in an atmosphere artificially warmed, the quantity of the secretion is increased: whatever, indeed, is capable of increasing the determination of blood to the uterus, increases the quantity of this secretion.

Interval between the recurrence and the duration of each period.—The interval between the recurrence of the menses, and the time of their duration at each period, is marked by even greater uncertainty than the quantity evacuated. Some women can tell to a day, and almost to an hour, when the discharge will again appear; in others there is a variation of three or four days. In Europe it may be said to return every twenty-eight days, or lunar month, calculating from the commencement of one period to the commencement of the next. It continues flowing generally from three to five days; in some women, however, it ceases in a few hours, while others are subject to it ten days or more. Some women menstruate without any apparent inconvenience through life; others are attacked each period with pains, more or less violent, constituting the disease *dysmenorrhœa*, attended with the most alarming and troublesome hysterical symptoms,

Premature puberty.—Many cases have been recorded of very old women, or very young children, menstruating regularly; but it is now ascertained that such appearances are almost always the consequence of disease, however nearly they may seem to imitate, with respect to time, the regular return of the catamenia. There certainly have been known some rare instances of children beginning to menstruate while very young, the discharge being preceded by hair upon the pubes, by an enlargement of the breasts, and spreading of the hips. These are cases of premature puberty, and are similar to a few which have been observed to occur in the male sex. An instance of such precocity is related in the Transactions of the Medical and Chirurgical Society of London, by Dr. Martin Wall, in the person of a child, aged nine years, who menstruated regularly, from the age of nine months, in whom also all the

symptoms which attend puberty were present before she was two years old.

Period at which the menses cease.—As old age approaches, in this country about the forty-eighth year, women cease to menstruate, and are afterwards incapable of bearing children. This is popularly supposed to be a very critical period, and is spoken of as the "turn of life," and in some counties by a very quaint phrase, "the dodging time," from the irregularity both as to the time and quantity which the discharge assumes when about to cease; for it very seldom happens that the menses disappear suddenly; but, before their complete departure, their periods become irregular, and more distant from each other.

In warm countries, and in those instances where the menses appear early, they cease to flow proportionally soon; even in this climate there have occurred cases in which their final cessation happened at the thirty-fifth year; others, again, in which they have continued until sixty; but these are very rare. Bruce has said that in the tropics women only menstruate and bear children during nine years of their life, and that these functions leave them at the age of twenty; and, following the celebrated Montesquieu, he adduces this fact as an argument in favour of polygamy: but, from the best testimony I have been able to collect on the subject, I believe that even in the warmest known regions, females menstruate at least till thirty-five. The inferences, then, to be drawn, as far as regards the period of life during which women are subject to become pregnant, are, that in the temperate climates they may bear children for about thirty-three years; in the tropical, during about twenty-five; and near the frigid zone, are liable to impregnation for twenty-eight or thirty years of their existence.

Uterine disease likely to occur about the period of the cessation of the menses.—However much popular opinion may err in the supposition that any deviation from the natural state of menstruation is a cause of disease, while it is merely a symptom of pre-existing derangement, it is perfectly true that at the time when the menses cease to flow, women are particularly liable to be attacked with those more malignant diseases, which deserve the attention of the medical practitioner, and which induce the individual to call for his assistance. Diseases of the mammæ, enlargement and ulcerations of the uterus, and cancer especially, frequently first shew themselves at this time: and it is a knowledge of this liability, not merely prejudice, that occasions the anxious feelings experienced by all women when verging on this particular age.

Many constitutional derangements also often appear at this crisis, such as indigestion, flatulence, disturbances in the biliary secretion, headaches, and sometimes a purulent or sanguineous discharge from the uterus, with pains in the loins, and many nervous feelings. These generally produce but temporary inconvenience: and it is not reasonable to attribute such, or more dangerous symptoms, to the cessation of this discharge as the cause; but to consider that at this time the uterus and other organs are predisposed, in a higher degree, to take upon themselves those unhealthy actions, which any accidental cause may excite.

Cautions observed during the time of menstruation.—I have before hinted, that women, at the time of menstruation, have some curious prejudices, in which, because they are rather beneficial than hurtful, it is right to indulge them. They are careful of catching cold, of getting wet feet, and great exertion. Some of our northern neighbours carry their caution much farther, and will not take acids, eat fish, or drink red wine, during the time. The medical practitioner must be on his guard not to administer very active medicines, and especially not to perform any surgical operation, while the menses are flowing, provided he has the choice of time; for the system is always more or less disturbed, and any excitement induced may be productive of much inconvenience. Personal cleanliness is strongly to be insisted on; among the higher classes, indeed, this advice is of course unnecessary, and it would be well if it were equally so in every rank of life; for we can easily suppose, from the immediate communication existing between the uterus and the groin, that the inner viscus may be influenced to take upon itself morbid action, by an accumulation of dirt on the external parts.

A favourable period for the reduction of prolapsed uterus.—During the menses the parts are much relaxed, and the natural mucous secretion from the vagina increased, so that an externally prolapsed uterus is more readily reduced at this time than any other.

Source of the discharge.—The source of this discharge is easily discovered: it can only proceed from the vagina or uterus. We know that the uterus furnishes it, from opportunities afforded of dissecting females who have died menstruating. Under such circumstances, the mucous surface of the uterus has been found softer and more villous than usual, studded with numerous red points, from which the fluid might be squeezed in small quantities. During life, also, in cases of procidentia, the secretion has been seen to distil *guttatim* through the os uteri; and Dr. John Clarke observed it actually oozing from the surface of an inverted uterus: so that it can have no other source than the uterine vessels themselves.

It was much litigated what class of vessels furnished this fluid. Ruysch and Cul-

len declared it to be from the arteries; Vesalius and Haller from the veins; and Simpson from certain specific sinuses.

The menses a specific secretion, and not blood.—In appearance it is dark, resembling, but rather blacker than, venous blood; it is of a faintish smell, and the stains left by it on linen are not difficult to be eradicated. From its resemblance in colour to the vital fluid, many have considered it to be pure blood; some ridiculous theories have been instituted upon this supposition, and it has acquired the name of *menstruous blood*. Even Dr. Denman makes use of this expression. But its resemblance to blood is confined merely to the colour, and it possesses none of the peculiar properties of that fluid. One of the principal attributes of blood is its being capable of spontaneous coagulation, by the separation of the serum from the firmer parts; the menstrual fluid, on the contrary, never coagulates. We have a good opportunity of proving its non-coagulability under the state of imperforate hymen. Many instances of such a malformation are upon record, in which the quantity of the fluid amounted to a gallon or more. I witnessed a case that occurred in this hospital some time ago, in which, on the hymen being punctured, above a gallon of fluid, the accumulated secretions of the uterus and vagina for many years, was collected. It was of a dark, thickish, consistence, but no part of it was solid; it did not possess a putrid odour.

To account for the menstruous blood, as it was called, not coagulating, it has been stated, that if fresh drawn blood be mixed with the secretion from the os uteri, the spontaneous separation does not occur; but we find that in all cases where pure blood is poured out from the open vessels, it coagulates very readily. Clarke says, "the menstruous secretion does not possess the coagulating part of the blood;" whilst Dewees observes, "it has been thought not to possess fibrin, as it does not coagulate; but this is not a certain criterion, as in some kinds of putrid fevers, scurvy, and small-pox, the blood does not coagulate. The blood of those who die from lightning, and blows on the stomach, does not coagulate; therefore, if it were blood, the mere absence of coagulability would not be a proof of the absence of fibrin."

Another property of blood consists in its being acted on by the atmospheric air: even after having been taken from the body, venous blood, if exposed to oxygen gas, acquires on its surface a florid appearance, resembling that fluid when circulating in the arteries; and if a cloth be steeped in blood as it flows from a vein, the colour will be observed to become brighter by degrees. But this is not the case with the menstruous fluid; it retains its dark colour however long exposed. Differing, then, in these two material points, from blood, we must class it among the secretions of the body, and point out those circumstances which incline us to this opinion. These observations, then, will lead us to the consideration of the efficient cause, or theories of menstruation.

Theories as to the proximate cause of the menses.—Almost every age has introduced some fresh speculation on the subject, most of them so absurd as to require no particular mention, even had we sufficient leisure.

Lunar influence.—Aristotle, his descendant Erasistratus—with whom also, among the moderns, we may number Dr. Mead—considered that the menses were governed by lunar influence. Their appearance every twenty-eight days nearly resembling the time taken up by the moon's revolution, and the known fact of the influence of that planet on the tides, with its ideal influence on mania, led the followers of this doctrine to such a supposition. Mead, indeed, was an enthusiast regarding the moon's influence over the body in many diseases. He says it has great power in hydrophobia, and gives several examples of persons bitten by mad dogs having uneasy feelings at the full moon. He knew a young man who brought on spitting of blood by an effort beyond his strength, which during eighteen months regularly returned at the full moon. But the principal argument of these physiologists is, in fact, a strong objection to their theory—viz. the apparent agreement between the moon's revolution and the return of this discharge. The menses, as before stated, ought to occur every twenty-eight days; the moon requires twenty-nine days and a few hours for the completion of her course. Thus we have a difference of more than one day in every month; consequently it must happen that, in less than two years and a half, the same woman would menstruate on every day of the moon's increase and decline. Besides this incongruity, we observe that all women do not menstruate at the same time, as would certainly be the case if the fluids of the body were, as the tides of the ocean, under the dominion of the moon; on the contrary, many of the millions of female inhabitants of this globe are menstruating on every day in the year. We consider, then, these two objections perfectly decisive, and reject *in toto* lunar influence.

Gall, indeed, states, that, when he practised at Vienna, "he soon noticed that during a certain number of days no women menstruated, and in others a great many menstruated at once." As this frequently

occurred, it excited his attention, and made him suppose that menstruation followed some definite law; he therefore kept a journal, in which he marked the periods of a considerable number of women for many years. The women of the same class all menstruate within eight days; after this time an interval of ten or twelve follows, in which very few menstruate. At the end of this number of days the period of the second great class commences, all the individuals of which also menstruate within eight days. These remarks are curious, and probably founded on observation, but have not been confirmed by any succeeding physiologist.

General plethora.—The second theory is more plausible, and bears the name of Galen as its chief support; he supposed the cause of this phenomenon to be a general plethora of the body. The arguments brought forward by the followers of this doctrine were, that as the woman is destined to nourish the fœtus, it is necessary that she should have a greater quantity of fluid circulating than the male, and that, when not impregnated, the superabundant blood escapes through the vessels of the uterus. Farther, they say that as the female of the human species does not feel, like other animals, sexual desire at any particular season, but admits the embraces of her husband at all times throughout the year, she must always be in a fit state for conception, and for nourishing the embryon; and that, if this outlet were not established by nature, congestion and inflammation of some of the internal organs would be the consequence of so much superfluous blood circulating through the system. In addition, it is declared that all the symptoms attacking a menstruating woman (especially subjects who menstruate with difficulty), are those of plethora, and that when the discharge from the uterus appears they are all alleviated; that sometimes, also, a vicarious discharge comes on, which removes all the troublesome symptoms, and superseding the necessity of the menses, prevents their recurrence. In refutation of these arguments we may remark, that although in a very small proportion of cases a vicarious discharge certainly does take place, in other patients who do not menstruate normally there is nothing of the kind. Besides, the symptoms which appear, are not, generally speaking, those of plethora, but the very reverse; for it is well known that women who menstruate irregularly are particularly subject to chlorosis, and all the attendant symptoms of debility. A conclusive fact, however, destroying entirely the idea of general plethora, is, that some women, when much emaciated, and others recovering from acute disease, menstruate exactly; nor can we prevent the discharge by bleeding, unless the evacuation be carried to such an extent as to disturb the healthy functions of other organs as well as the uterine. Supposing, then, that a large quantity of blood be drawn just before the time when the menses are next expected, and that the loss sustained does not interrupt the appearance of the discharge, it must be evident that general plethora cannot be considered as the cause.

Local plethora.—The knowledge of these circumstances gave rise to the third theory—that of local plethora of the uterus. The great names of Haller and Cullen are adduced as authorities for adopting this theory. Dr. Cullen reasoned in this way: the growth of the body, he says, depends upon the quantity of circulating fluid distending and elongating the vessels. When the body has arrived at its proper size, a determination of blood is induced towards the uterine system, which is evolved later than the other parts, because its functions are not required until the other organs are perfected. After the genital organs have attained their natural size—when the blood thus determined is no longer required for their increase—a congestion or local plethora is the consequence, for the relief of which a hæmorrhagic effort is established; and by this means the balance of the constitution is restored. This would produce the first appearance of the menses; after a time the uterine system would again become surcharged with blood, and again the same method would be adopted for emptying the vessels. In this way the discharge would return periodically, the force of habit tending very much to produce the regularity of its appearance. But, gentlemen, you will agree with me, I think, in saying, that if this reasoning were correct, nature, that most delicate of all artificers, would have bungled in this instance in a manner unworthy the merest mechanic. To suppose for a moment that any of her arrangements, founded upon principles so just and nicely adapted, could be left by her in this unfinished state, depending only on the force of habit, would be an idea continually open to complete refutation by the most superficial observation of her wonderful contrivances. Besides, if a rupture of the mouths of the uterine arteries were indeed the cause of the menstrual appearances, we should have pure arterial blood poured out, instead of a fluid presenting those peculiarities before noticed.

Haller's idea is still more unsatisfactory than that of our great countryman, Cullen. He appears to have considered that the uterine *veins* became turgid and congested with blood, and that their coats actually

gave way and evacuated a part of their contents. Blumenbach refers this phenomenon also to a local plethora.

Another theory ascribes the flowing of the menses to the venereal impulse experienced after the age of puberty. It was supposed that by the agency of this strong stimulus the blood was propelled into the structure of the uterus as it is into the corpus cavernosum penis, by which means a congestion took place, and the blood was squeezed out by the vessels becoming too full. But the structure of the uterus, so far from being similar to that of the corpus cavernosum, is firm and dense; no enlargement of its substance can take place similar to what occurs in the distention of the penis, and therefore the hypothesis is founded on a want of anatomical observation. Abernethy, in his Physiological Lectures, delivered in the College of Surgeons in 1817, says, "Why nature should have doomed the human female to the periodical loss of so much nutriment, and proportionate power, is a problem that can only, in my opinion, be solved by supposing that it relieves uterine irritation, and mitigates the extreme of sexual desire, thus enabling her to conform to the laws of morality and the social compacts that are established between us." However unwelcome this sentiment may appear, as tending to degrade the female character, by rendering the moral feelings completely subservient to physical structure, we cannot deny the plausibility of the doctrine.

You will have perceived that all these hypotheses were founded upon the erroneous idea that the menstrual discharge consists of blood; but as I have shewn you satisfactory reasons for its being considered a secretion, they must all be rejected, even if that circumstance were the only objection that could be urged against them.

Other theories have been adopted at different times, the explanation of which does not necessarily depend upon the presumption that the fluid evacuated is pure blood.

Fermentation within the uterus.—At the first dawn of chemical science, when every natural action, either of the animate or inanimate world, was referred to and explained upon the principles of chemistry, at that time so little understood and so frequently misrepresented, the appearance of the menses was said to have its origin in a peculiar fermentation, taking place within the uterus. It is not easy to understand what analogy could be drawn between the act of menstruation and the process of fermenting liquids; but chemical discovery was the rage and fashion of the day, and because it was known that a *tertium quid* was formed by allowing particular substances to undergo the vinous or acetous fermentation, the same agent was declared to be the efficient cause of menstruation. This supposition, as well as Dr. Freind's idea of mechanical plethora, requires no refutation; it is so strongly stamped by absurdity, that it would be a waste of words to endeavour to overthrow it.

The last theory which I shall mention is the one at present followed—viz. that it is a secreted fluid, as completely under the laws of secretion as the bile, urine, or any other. I believe we are indebted for this simple view either to Dr. or Mr. John Hunter. It is uncertain who first suggested the idea that the menstruous discharge was a secretion; the credit of it has been given to Bordeu, Hunter, and Saunders. The arguments in its favour are numerous. In the first place, the vessels run throughout the uterus in a tortuous or spiral manner, similar to the arrangement of the vessels in all secreting organs. The uterus, indeed, is furnished with a secreting membrane which lines the whole cavity; but I am not inclined to believe that the same surface which affords the mucus lubricating the part secretes also the menstrual fluid: it is more reasonable to suppose that there is a complete set of vessels circulating through the uterus, as through a gland, which furnish at stated times the menses. Again: the fluid is certainly not blood; and in some animals there is a peculiar fluid secreted at the time when they are in heat, not indeed resembling, in external appearance or chemical properties, the menstrual discharge, but proving that a disposition exists even in them for the formation of a different and more copious secretion at particular periods. In many cases, also, of difficult and painful menstruation, a complete membrane is formed within the uterus, and comes away as the menses flow: this, if we reason from analogy, must be secreted, and forms a strong argument in favour of this doctrine.

This theory, however, has met with many opponents. It has been said, that the difference observed between the fluids secreted in the uteri of other animals and that furnished by the human uterus, is an objection. It has been objected to on account of the colour, because no other secretion of the body is like it; but I would ask, are there two glands of different structures in the system which secrete a similar fluid? Why is the bile of that particular colour and flavour? Why is the urine often limpid? How can we account for the blandness and nutritive qualities of the milk? The only answer which we can return, is, that nature has so ordered it that every secreting organ should furnish such a fluid as is requisite for the different purposes it is designed to fulfil in the great mechanism of the animal economy. It certainly does happen, occa-

sionally, that a woman voids pure blood at the time of menstruation, together with the proper discharge; but this is always a symptom of disease, and is never met with in instances where the function is performed in a proper and healthy manner. It generally accompanies menorrhagia. The periodical return of the catamenia is not more astonishing than many other phenomena occurring in the living body; for instance, the regular accession of a tertian or quartan ague. It is instituted by nature doubtless for a wise purpose, and governed by steady though inexplicable laws.

Use of menstruation.—The final cause or intention of menstruation has given rise to much controversy. As its presence and regular recurrence is the surest test of uterine health, so its intention appears to be to preserve the uterus in a state fit for conception. That this is the use of the discharge is almost proved to demonstration, by the known fact that women who are unable to menstruate scarcely ever conceive, and that those who menstruate with difficulty are also rarely pregnant. The analogy drawn from other animals also holds good here; for the mucous discharge from their uteri proves that they are in a state favourable to the propagation of their species, and the menstruous secretion is a proof of the same in women. Most other animals experience a desire for procreation only at particular seasons; and it is so ordered that the offspring should be produced at those times best adapted for rearing them: but in woman, as this discharge appears every month, proving her in a fit state for conception taking place, the power of generation continues throughout the year.

We cannot but be impressed with the providence of nature, when she formed women only capable of conceiving during those years of their life while they are subject to the menses; for as this evacuation never happens except at that period when the system is in its greatest vigour, there is always power to afford a sufficiency of nourishment to the infant, and the mother herself is perfectly able to administer those little offices which every being, until it arrives at a certain age, requires. Unless this had been the case, children themselves would have become mothers, and women sinking into the grave would have borne children at a time when they could neither afford their offspring nourishment nor attention.

Before the adoption of this theory of secretion, it was supposed that there was always circulating through the uterus more blood than was sufficient for the nourishment of that viscus, and that the superabundant quantity was for the purpose of affording pabulum to the new being after conception had taken place. Menstruation, then, was considered to have been established with the view of supplying the fœtus with the means of life and increase. Surely, if this were the case, since the fœtus is comparatively so small during the first weeks of gestation, there must either be too much nourishment provided in the early stages, or too little in the advanced state. Had there been a gradual diminution in the quantity of menstrual fluid as gestation proceeded, an argument might have been raised in favour of such a supposition; but in conformity to the facts before us, we are bound to discard it.

The most ancient, and perhaps the most universally received theory, respecting the intention of this periodical discharge, was that derived from the Arabian and Greek physicians—viz. that it was instituted with the view of carrying off some noxious humours which would be highly injurious if allowed to remain within the system. The laws laid down by Moses, to govern the conduct of a woman under menstruation, are particularly precise and strong: he ordains that she should be accounted unclean for seven days, and has also denounced the same judgment against a man cohabiting with a menstruating woman. There can be little question that the strict regulations regarding ablution, met with so constantly in the writings of the inspired Jewish legislator, owned a political rather than a moral origin. It is a natural consequence of his divine authority, that his commands should be scrupulously obeyed by the people; that other nations who held intercourse with the Jews should be led by degrees to follow many of the usages enforced by a personage so highly venerated; and that custom should have added her strong arm in rivetting still more closely those manners which had been previously formed. On the principle, then, of personal cleanliness being so essentially necessary at the time of menstruation, it was assumed that the fluid was of a malignant character, and that its purpose was to free the body from a quantity of injurious humours, which there was a natural inclination in the vessels to generate. To such an extent, indeed, even in comparatively late times, was the opinion regarding the malignancy of this evacuation carried, that the presence of a menstruating woman was firmly believed to produce a blight on vegetation, and abortion, if a pregnant female happened to approach her. In Pliny, she is described as being eminently pernicious—blighting fruit, destroying grafts and hives of bees, drying up fields of corn, causing iron and copper to rust and smell, driving dogs mad, and disgusting even ants with their food. De

Graaf has a very strong sentiment on this subject:—"Penis cum menstruata concumbentis excoriatur; si novella vitis eo tangatur in perpetuum læditur, steriles fiunt tactæ fruges; moriuntur insita, exuruntur hortorum germina; si mulier pregnans alterius menstrua supergrediatur, aut illis circumlinatur abortum facit; ei autem quæ uterum non gestat concipiendi spem adimit; vapor ab ore specula atque eboris nitorem obscurat; gustatus hic sanguis canes in rabiem agit, homines vero diris cruciatibus affligit, commitialem morbum, pilorum effluvium, aliaque elephanticorum vitia."

The doctrines advocated by the great Boerhaave tended also to keep up this delusion; but we are now perfectly convinced, not only that the fluid itself is of a most harmless and inoffensive nature, but that the baneful effects attributed to it are founded upon errors growing out of a deep-rooted superstition. By being allowed, indeed, to remain stagnant and putrefy, this, as well as every other secretion, may become offensive, and even acrimonious; and these changes are more quickly produced in the warm than in colder regions. We cannot, therefore, too much admire the intentions with which cleanliness was so strongly commanded by the high authorities of the Jewish nation; nor too much despise the superstitious feelings of those people in giving laws to whom it was necessary to adduce the dazzling mystery of a religious precept before attendance upon the commonest duties of life could be enforced.

I may observe that in Europe, instead of the menstruating woman secluding herself and being shunned as a pest producing destruction to vegetation, and contaminating every person with whom she holds the slightest intercourse, she mixes with society as usual, and no alteration whatever can be perceived by a casual observer, either in her manner or appearance.

Concluding summary.—In conclusion, we will repeat a few of the leading facts connected with this singular discharge. First, it is confined to the females of the human species. Secondly, it is a secretion proceeding from the uterus. Thirdly, it appears every 28 days, unless interrupted by pregnancy, suckling, or disease, from about the 15th to the 48th year. Fourthly, it is for the purpose of preserving the uterus in a state fit for the reception of the impregnated ovum. And lastly, it is perfectly bland and harmless in its nature; and, unless when changed by putrefaction, by no means possessing those hurtful qualities so industriously heaped upon it by the Arabian and Greek physicians.

ON DENTITION;

WITH AN

ATTEMPT TO EXHIBIT THE OCCASIONAL PRESENCE OF CERTAIN DISEASED CONDITIONS OF THE BODY,

As connected with its Irregular States.

By Dr. Ashburner.

[Continued from page 189.]

The preliminary inquiries relating to the course of events constituting normal dentition have been gone through; and if the meaning of the investigation have not been clearly expressed, the ulterior objects of our inquiry will be ill understood. Have we determined the standard of normal growth about the teeth and jaws? We have as yet, in our efforts to arrive at a severe definition, approximated only to the object of our desires; and it is feared that the approximation, such as it is, may be still wide of the truth*.

As far as we know of normal periods, they have been defined. We have then to ask, What are the *inconveniences* resulting from anormal trains of growth in the teeth and jaws? The question has two sides; the one relating to the local inconveniences; the other to those which arise in the frame generally. The

* In reference to the criticism of a General Practitioner, in the last Number of the Medical Gazette, on the *attempt* I have made at an *approximation towards the normal order* of the eruption of the first set of teeth, I must remark that my courteous critic and I are, *in limine*, disagreed upon the meaning of the term *normal*. I feel obliged to him for having published Sir Richard Croft's table: but a little reflection upon the considerations in the first part of my article would have convinced him that the given order cannot be *normal;* and a little more reflection would have shewn him that his own sphere of observation is not generally among *perfectly healthy* children, and that the chances are against his having taken the pains to select a few out of his fifty observed cases, in which he could have been sure that the developments had proceeded without pain, or other inconvenience. In the meantime, there is some use in recording the fact, that in civilized society, as at present constituted, there is a frequent repetition of one order of eruption, opposed though it may be to anatomical norma;—that there are certain laws, producing the frequent recurrence of a given aberrant series of developmental trains, allowed by the General Practitioner to vary occasionally. I have, in the first part, purposely avoided the history of anormal eruption, in the hope that the exhibition of the importance of the subject might induce other men to study developments as I have done, and to record anormalities. The General Practitioner, not having reflected upon the laws regulating aberrant series, has little idea of the extensive considerations they involve.

division is artificial and unphilosophical; but it is adopted because it answers our purpose, for the sake of limiting the extent of our observations.

We see very few persons who have not suffered more or less severely in the mouth, from the local consequences of anormal dentition. It would be very trite to speak of the common occurrence of tooth-ache; yet the subject of the influence of anormal growth in the production of diseases of the mouth, has been very little investigated. It is generally acknowledged as a fact, that children suffer more or less during the progress of dentition; and that very few adults are seen with a perfectly normal condition of the mouth; indeed, so rare is the occurrence of a normal state of the teeth, that the beauty of a fine set of teeth is a striking object of admiration. The local inconveniences resulting from anormal trains of growth in the teeth and jaws are not few. The surgeon is already well acquainted with this part of our subject. Among them may be enumerated those congenital defects more or less allied to the fissure we know as hare-lip: irregularity in the curved alignement of the teeth; decayed teeth; other diseased states of the teeth; inflammations, abscesses, and tumors, resulting from these, or from irritations in the course of growth to the jaw bones, muscular, cellular, and glandular tissues of these parts. The mouth, the throat, the nostrils, the palate, and all the neighbouring parts, have disease inflicted upon them occasionally, by anormal conditions of the teeth and jaws. This is too well known to require observation just now; our present pursuit is the investigation of the other side of the question, that which relates to the coincidence of disease in other parts of the frame with normal states of dentition.

If we wish fully to reply to the question, What are the coincidences of disease in other parts of the frame with anormal dentition? we must have a knowledge of the very various tendencies which may exist in different parts of the frame in alliance with the tendencies about the teeth and jaws, and even of the *slight degrees* of erroneous action in the system, resulting from irritation to the skin or to other villous textures, parts of the dermoid systems, and of the influence exerted by these upon the nervous system. Looking extensively upon the subject of developments of various organs of the body, we should inquire into the coincidences of anormal structure in these with anormal configuration in the parts which form the more immediate subject of our inquiry, and we shall often find that anormal developments in one part of the body are linked with errors in other parts. We may find too, that where error exists, the degree of it may not be very serious; or, on the other hand, according to a gradation of circumstances, the accruing mischief may entail consequences of vast importance. If the subject be regarded in this manner, the anormalities attendant upon dentition will be found not to be confined to the period of childhood. A review must be taken of the symptoms of disease to which children are liable in the progress of their growth; and the state of knowledge up to the present time being assumed to be given in the latest works, which, by common consent, are allowed to be authorities, we must proceed to the analysis of these symptoms.

It will be found that most of the complaints of children can be grouped into one family; that they can be classed under one general head; and that, for the most part, they form the symptoms of one disease, the existence of which depends upon irregularity—upon *anormality* of growth. It is not intended to confound the specific diseases arising from contagion, with the symptoms of irritation arising in the progress of faulty growth. How much soever the pathology of one train of evils in the system may elucidate other trains, care must be taken not to trench much upon inquiries too far wide of our present subject.

Most of the complaints afflicting children are referrible to cerebral or nervous irritation, the various symptoms of which are parts of the disease called hydrocephalus acutus, or water in the head. The manifestations of irritated nervous centre, constituting this morbid state, it is proposed to consider, as our illustrations may permit, separately. The start in sleep; the moaning in sleep; the shivering fit; the slight thrill, hardly a rigor; the flush of countenance; drowsiness; perspiration; neuralgia; spasmodic twitchings of certain muscles; continued spasms of certain muscles; squinting; wry neck; locked lower jaw; spasmodic croup; intus-susception; chorea; epilepsy; catalepsy,

and its minor degrees, appalment, forgetfulness, nervousness, and stammering; tetanus and coma; diarrhœa and costiveness; deafness; and amaurotic blindness, are parts of hydrocephalus. What is the object in regarding these in their disintegrated state? To show that either in a *slighter* or a *severer* degree, each one or more of these conditions of irritated nervous centre may be coincident with anormal dentition.

This is a new mode of regarding the acute water in the head; but are these the only views that offer themselves from the point of aspect we have chosen? We know that the skin and its appendages, and the mucous or villous surfaces of the body, are closely knit together in the analogies which they offer; and that irritations to the nerves connected with one part of these systems, are curiously responded to by disordered conditions of some other part. There is a medium through which the message is made to travel. The nerves proceeding from the mucous surfaces of the intestines take their course to the brain, where they are intimately associated with nerves arriving from either some part or parts of the skin.

In the diseases which appear to result from the local changes consequent upon the inoculation of a morbific fluid upon the skin, the connexion between the constitutional signs and the local change of structure, is still very obscure. I tried to investigate this subject fourteen years ago, when I was physician to the Hospital for the Small-pox. Endeavouring constantly to look in the direction of anatomy, I established some new points. (See a paper in the 27th No. of the Medical Gazette, vol. ii.) It being an object to discover the specific change of organization in the skin which is the antecedent or coincident to certain trains of cerebral irritation, my researches on the anatomy of the variolous pock have carried on the investigation one step.

In variolous diseases, in hydrophobia, in syphilis, and in some other conditions of irritation or poison applied to the villous part of the skin, there would appear to be a process carried on under the direction of certain laws, which would seem to imply a connexion of an intimate nature between the dermoid organs and the nervous centre—an alliance vaguely and loosely expressed by the use of the word sympathy. Dr. John Clarke well observes (Commentaries on some of the most Important Diseases of Children, pp. 96, 97), that "all the arguments founded on the doctrine of sympathy and irritability are drawn *ab ignoto;* and it seems much more conformable to reason and observation to infer, that such * * * affections arise from *some derangement of organization, however temporary*, than to resort for an explanation of them to imaginary causes, and such as offer to the mind no satisfactory conclusions."

The fact is, that certain states of the dermoid system, and certain states of the nervous system, are coincident; or that the one immediately precedes the other. The coincident or antecedent, and consequent events, may vary according to the peculiarities in the structure of the individual, which it has been usual to express by the terms temperament and idiosyncrasy; or they may vary according to the condition in which the individual, or parts of the system, may happen to be at the time. Taking the subject of dentition, and the relations of its anormal states, parts only, be it remembered, of the development of the whole organism, as the topic of our inquiry—seeing the manner in which the complicated organizations of the capsules, teeth, and jaws, are related to each other, and connected by the medium of the fifth pair of nerves with the brain—seeing some reason from the anatomy to class the teeth with the dermoid systems, and seeing analogous phenomena exhibited by disordered conditions of these parts and of those systems, we are left to trace the circumstances that can fairly be classed together. If, in the progress of our investigation, we can perceive that offences against the healthy integrity of the dermoid systems are responded to by the occurrence of events analogous to those which are coincident with pressure, or other minor mischief, to the nerves connected with the dental pulps, we shall have additional reasons for arranging the teeth according to the classification of some of the great comparative anatomists.

Taking this view of the subject, we shall be enabled to understand how, besides the infantile remittent fever, and the acute water in the head, or their individual symptoms, various diseases of the skin may be coincident with anormal dentition, or vicarious with the diseased states to which allusion has been

made. The field thus opened up for investigation is very extensive; and when we consider the limited range offered by confining the attention to the anormal development of one set of organs only, we shall be tempted to examine the relations of these to that of other parts, and thus wander into regions that, to the unreflective, would appear to have no connexion with our subject.

In treating of the disorders coincident with anormal development, it is proposed to detail events as they have offered themselves to my own mind—to endeavour to connect some of these events in natural trains; and where the link between coincident parts of a chain can be exhibited, an attempt may be hazarded at an hypothesis. In this there can be no unphilosophical presumption. The hasty and eager desire which superficial thinkers display, to account for obscurities in coincident phenomena, ought to teach caution to those who are engaged in the search after truth; and perhaps it ought to teach resignation under misrepresentation. It is much to be feared that the strong motives to silly sneering which public life places before those engaged in professions, blind them while they travel in the path of science, and not only induce a haziness in their own intellects, but lead to a desire in them to misrepresent the views of others. Truth has a most excellent test in time; and if the observations which have been already made shall not accord with the careful and vigilant notice of the same trains of events by others, fallacies will be detected, and past imaginings will meet with the neglect which erroneous statements acquire. If the proposition had at any time been put forth, that anormal states of dentition were invariably and immediately the *causes* of serious disorders of health, a doctrine would have been advanced which the experience of most medical men would have enabled them to subvert at once. The country practitioner more especially would instantly put his negative upon the assertion; for in his experience, unless the district in which he practises be a marshy country, or have circumstances about it depressive of the vital forces, anormalities in development are, for the most part, compensated by the energy which a pure and invigorating atmosphere communicates to the nervous system. In the country, obstacles to the normal progress of growth in the teeth and jaws, may, and occasionally do, intervene; but the forces of the constitution are in most cases sufficient to overcome the inconveniences resulting from them. In London, and in large towns, it is different; errors in the progress of growth communicate their influence to various organs; and according to the tendencies of the constitution, according to the *idiosyncrasies* of the individual, or according to the condition in which surrounding circumstances may have for the time placed him, the mischief, which may vary certainly in degree, is felt in one set of organs or in another. Unless much more were known of the precise coincidence which a certain anormality may require—of the precise trains of symptoms indicating certain erroneous trains of growth—it would be impossible to point out the diseased states and irregular developments that are linked with each other.

We are not aware fully of the coincident events connected with development, which take place in the earlier periods of infancy—a time of life when the mobility of the frame, and the rapidity of change in the course of growth, render their consequences so striking. In pointing out, therefore, the links in the chains of diseases which hang on irregularities in the course of development, the most that can at present be attempted is to trace analogies; and even in this task, the complications that beset every event in the animal economy may tend to confound us, and to lead us wide of the direct line of our inquiry.

Regarding the infant, we ask if coincidences of disease with anormal dentition can fairly be traced before the usual period of cutting the teeth? Superficial observers have a fashion of scouting ideas inconsistent with the notions they have imbibed from their masters. We know well that children, at very early periods after birth, are the subjects of convulsions. Irritations upon the skin may be vicarious with these epileptic attacks, or irritations upon the mucous part of the alimentary canal may affect the nervous centre. Why may not a turgid state of vessels about the dental matrices, in the simpler and less complete conditions of organization belonging to this period of life, immediately compress the dental, or even the maxillary nerves? The subject of convulsions in earlier infancy is yet involved

in considerable obscurity, and if we shall at a future time see reason to approach the conclusion, that pressure applied under certain conditions to a nervous tendril of a motor portion of the fifth pair is nearly tantamount to pressure applied to certain parts of the brain, we may well believe that irregularities in the course of growth at the earlier periods of infant life may produce pressure that shall be succeeded by convulsions. Perhaps pressure or other irritation, applied to a sensitive nerve, may be succeeded by tic douloureux, or a slighter neuralgia.

A fine healthy-looking child of a strong Irish woman died at thirteen weeks of age, of a convulsion fit. My suspicions as to its having had improper food were not well founded. The mother was anxious to have the cause of death ascertained, and I found no difficulty in obtaining leave to open the body. The organs for the most part were healthy; the stomach contained only a little milk; no error upon the mucous surfaces of the intestines. Skin perfectly healthy. The contents of the thorax, as well as those of the abdomen, were quite healthy. In the head there was a slightly injected state of the vessels of the pia mater, but in other respects the brain was quite healthy. The capsules of the incisor teeth were large and very vascular, much more advanced than usual. With a lancet the cartilaginous rim of the lower jaw was attempted to be removed, with a view of exposing the capsules of the molar teeth; but these were so unusually distended with fluid, that the instrument cut into them and let it out. This was an example of development proceeding too hastily.

Convulsions frequently occur in coincidence with a development which is too hasty in its progress. They arise from the same state of nervous system which, under a less severe degree of irritation, is productive of partial spasm. Pressure on a nervous tendril supplying a dental capsule is, perhaps, at first attended by twitchings of only the flexor muscles of the hand and arm; then of the muscles about the angle of the mouth, cheek, and eye-lids; then, may be, the parietes of the abdomen harden. The associations of nerves all over the body are so extensive, that it would be difficult to say what set of irritated nerves may induce general convulsions. An irritated portion of the mucous surface of the colon may be coincident with spasm of the calf of the leg, or of the abductor of the great toe. They who are accustomed to visit the lying-in chamber, know that women in labour often suffer from severe spasms in the legs, coincident with irritation about the neck of the womb. The persons who have suffered from these cramps, may perhaps have no further irritation in the nervous system. The nerves only, whose functions relate to these parts and to those in their district, may have been irritated. The mischief is restricted to a part. All the nerves, those productive of more general symptoms or convulsions, may not be affected. It is clear they are not in every case necessarily affected; but they may become affected; for spasms of particular parts are in many cases forerunners of convulsions. The degree of spasm being at first slight, is afterwards aggravated, and, neighbouring nerves being associated, is produced into the most severe form. Dr. John Clarke (Commentaries, &c. pp. 88, 89), writing with great practical sagacity on these subjects, has said, "A bending of the toes downwards, clenching of the fists, and insertion of the thumbs into the palm of the hands, and bending the fingers upon them, is sometimes found not only during the paroxysms, but at other times.

"Clenching the fist, with the thumb inserted into the palm of the hand, often exists for a long time in children, without being much observed; yet it is always to be considered as an unfavourable symptom, and frequently is a forerunner of convulsive disorders, being itself a spasmodic affection.

"It rarely happens that a child recovers from an attack of this sort, unless the progress of the disorder has been interrupted by a timely application of proper remedies, without a general convulsion."

I attended a fine boy from the cutting of its first incisor tooth to the completion of its dentition of twenty teeth. It was the last child of a family in which all the children had afforded examples of anormal dentition. This boy was of a nervous temperament, with black hair and eyes. Every tooth had come forward with a want of biliary secretion. Nothing could exceed the care observed by the watchful mother, as to the diet of this infant; yet, whenever an effort at developing a tooth took

place, she was always aware, from the deficiency of bile in the evacuations, that he was to have slight fever, sometimes with a catarrh and cough, always with twitchings of the face and fingers, and starting and moaning during sleep, and a catch in fetching a deep sigh. With the appearance of the four first molares the spasms were more severe. The thumb of the right hand was thrust into the palm, and the fingers clenched upon it; the toes were drawn down; the face was distorted. These spasms relaxed and reappeared. I found, on these occasions, that the tooth was always anormal in its progress; seldom observing its turn, and never its time. The gum-lancet freely used always cured these spasms. On the last occasion, I was sent for in great haste, for the spasms had been continued into an epileptic fit; from which I speedily and effectually relieved my little patient by cutting through the capsule of the coming tooth.

I was called one evening to the child of a lady in Regent-Street. It was a fine girl of fourteen months of age. The head was large; dark hair; dark eyes. It was in a tub of warm water, quite insensible, passing from the state of epilepsy into tetanus. Its eyes were not influenced by light; the pupils remained dilated. The anterior molaris of the left side, in the upper jaw, was ready to come through. I cut freely through its capsule with my gum-lancet; in two minutes the child was on its knees in the water, playing with the handle of the tub, in excellent spirits. This child had been twitching the angle of its mouth, and had had its right arm spasmodically affected, during the day.

To enumerate cases like these would be not at all difficult. No practitioner, conversant with the disorders of infants, will deny that, while the teeth are troubling them, they are apt to be convulsed. (See Hurlock on Dentition, Introd. Pref. p. xix.)

Although convulsions, or epilepsy, be not so common during the progress of second dentition as they are in the earlier development, yet many cases occur in which their presence may be attributed to pressure, opposing the progress of growth, and thus irritating certain nerves.

A boy, twelve years of age, was cutting the second or posterior permanent molares of the upper jaw, before those of the lower, and the process was accompanied by twitchings of various parts of the body. At last he became affected with chorea. Being a very nervous lad, if any notice were taken of him, he would quite involuntarily make the most extraordinary faces, and contort his body into various attitudes that appeared to be most difficult and painful. This chorea continued for three months, during which time a variety of medicines were swallowed. At last he fell into an epileptic fit, struggling much, foaming at the mouth, and grinding the teeth. I thrust my fore-finger along the inside of his cheek, and found a hard cartilaginous space on each side, behind his first molar teeth. I succeeded in gashing these parts: he uttered a scream, and fell out of his fit, becoming quite sensible; nor had he a recurrence of his chorea.

A young gentleman, twelve years of age, with dark hair and eyes, greasy countenance, lymphatically stout, was removed from school, and sent to some relations in the country on account of being attacked by chorea. His bowels were costive; he had offensive breath; he started and moaned in his sleep. Something unpleasant to his feelings occurred in conversation, and he fell into an epileptic fit. On recovering, he was placed in bed, where he slept soundly for two hours, and on awaking was perfectly unconscious of having had a fit. During the next fourteen months, this boy had many recurrences of his fits, and though much medicine was swallowed, nobody thought of the probability of his cutting teeth. In shewing me the young man at eighteen, his father said he had had no fits for four years: he supposed he had "*outgrown*" them,—a truth spoken without reference to my hypotheses.

A lady, with dark hair and eyes, tall and handsome, of a highly nervous temperament, married at the age of nineteen; and was pregnant of her first child about eight months, when she was seized with an epileptic fit. She had for several months been affected with twitchings in her cheeks, and "live blood" was often very troublesome in her left eye. The epilepsy recurred twice before her labour, which was a very favourable one; and she had a very good getting up. She nursed her child, which throve very well. At the end of seven months from her delivery, twitchings came on

again, and she had at last another epileptie fit. They eame on now twiee, sometimes three times, in the week. The best physicians—some of the best surgeons—were consulted. The digestive organs were attended to, and she took various medicines. The fits eame on at longer intervals; then, sometimes, two appeared in a day. I saw her first when she was twenty-two years of age. I was expressly told that she was placed under my eare, with no hope of her recovery, but merely that I might look to the general regulation of her health. My first office was that of eonsulting-dentist, for I gave her an opinion upon her teeth, which was to the effeet of eondemning her to lose seven deeayed molares. One of these was the only wise tooth she had eut. Three other hard eartilaginous obstacles to the progress of her teeth were removed, and this lady has had several years of freedom from epilepsy.

A young woman, nineteen years of age, of light hair and fair complexion, of fine tall figure, rather fat, was, in the year 1818, apprentiee in a straw-bonnet shop, in Hayes's-eourt. Her oeeupation was sedentary, and she had not been in the habit of paying attention to the state of her bowels: they were suffered to be very eostive. For several months she had perspired profusely at night, and her breath had been observed to be very offensive; she started in her sleep, and had repeatedly awakened her bed-fellow by kicking her on these oeeasions. She moaned and talked in her sleep. Dr. Nuttall, who was my colleague at the Westminster General Dispensary, was suddenly called to her, on aecount of her having fallen into a fit. He caused her to be profusely bled, and she recovered so far as to be able to see her physieian at the dispensary. Three weeks afterwards, the doetor being from home, I was obliged to see this patient in a fit similar to the first she had had. I learned that she had been very odd and nervous in her manner, and had often suddenly sereamed out from cramps seizing her toes and the calves of her legs, which were succeeded by her thumb being drawn in towards the palm of her hand, and her fingers being clenched upon it. I found her in a state of tetanus. The convulsion was over. I thrust my fore-finger into her mouth, where I found the wise teeth of the upper jaw through. In the lower jaw the teeth could not get through, for there were hard cartilaginous substances in their way; through these I seored freely, and the young woman was relieved instantly.

I was called last year to Upper Marylebone-street, in the night, to see the daughter of a very honest and independent tradesman. She had been attended for the fit in which I saw her by two medieal friends. The parent's anxiety made him apply to me. The patient was a fine young woman, of nineteen, with dark hair and eyes. She was stiffly eurved in tetanus. I asked her sister if she knew whether any wise teeth had lately been eut. Upon her answering in the affirmative, I took a gum lancet, and relieved my patient instantly, by eutting through the obstacle to the progress of her wise tooth, in the right side of the lower jaw.

[To be continued.]

HOOPING-COUGH CURED BY VACCINATION.

To the Editor of the Medical Gazette.

Sir,

A few notiees of this subjeet, and a few cases of this kind, have been published, exclusively, as far as I know, in your journal, vols. vii., viii., and xii. The influence of the vaecine virus, however, upon hooping-eough, does not seem to have been noticed in any systematie or elementary work. It is not even adverted to in the very recently-published artiele on hooping-cough, in the Cyclopædia of Practical Medicine. I have lately met with a ease very decidedly eonfirmatory of the power of the vaccine virus in checking the progress of this disease; and through your journal, sir, I beg to add it to the stock of facts already before the profession, in hopes that the remedial powers of the virus may speedily be amply confirmed, and the utility and safety of this practice established. In a family of two children, the elder had hooping-cough for several weeks before the younger had any cough. In about ten days after the commeneement of the cough, the hoop was evident in the latter. On the third day afterwards, I vaccinated this child. Before the fourth day, the fits of cough-

ing, which had previously been prolonged to four or five minutes, were so much abated as to continue less than one minute. By the time the cow-pock vesicle had attained its acmé, the hoop had completely disappeared. The elder child continued to cough, *with the hoop*, for a period of several weeks after it had disappeared in the younger.

It was at one time supposed, that in order that vaccination should have this peculiar influence upon the progress of hooping-cough, the introduction of the virus should take place in the third week after the commencement of the hoop *. The cases which have been published, particularly those by Mr. Chevalier, in the 12th vol. of the Medical Gazette, seem to prove that, at whatever period of the disease vaccination shall take place, the effects are uniformly the same. For instance, in Mr. C.'s *first* case, the child was vaccinated three or four days after the formation of the hoop, and cured completely within the week. In his *second* case, the disease had lasted upwards of two months. The child was at this late period vaccinated, and the cough had disappeared by the eighth day. The *third* case had laboured under the disease for *four* months. This child ceased to hoop as the cow-pock vesicle attained its acmé. It seems, then, to be ascertained, as one of the laws affecting this power of the vaccine virus, that it is immaterial at what period of the hooping-cough the introduction of the virus takes place; the arresting influence being displayed equally at all periods of the disease.

It may become, to one desirous of employing this mode of checking the progress of hooping-cough, a question of doubt and anxiety whether the influence of the vaccine virus, in protecting against small-pox, may not be deteriorated or destroyed by its insertion during the presence of hooping-cough. The vesicle, at the time, proceeds as normally and regularly as if no disease were present, and no hitherto published cases yield the smallest grounds for a presumption that its protective power is diminished, or in any way affected. I would be disposed, therefore, to hold it almost completely established that the protective power of the vaccine virus suffers no deterioration or diminution by its insertion during the progress of hooping-cough.

We are not in possession of sufficient *data* to determine whether the child in whom hooping-cough has been by this method arrested, is equally protected against a return of it, as he would have been had the disease been allowed to run its course.

What application and use will be made of this discovery, supposing it incontesitbly established, and also generally known? Some will hesitate to postpone the vaccination of the child, while, I doubt not, many will be inclined to advocate its postponement until the occurrence of hooping-cough, in circumstances where there are no rational grounds for dreading the risk of the infection of small-pox. To what results it may lead, we cannot foretel: meantime, we should ascertain the laws of its operation, and in a few years *nous verrons*.

Your obedient servant,
THOMAS ADAM.

Banhead, Oct. 23, 1833.

* See Dr. A. T. Thomson's Lecture, Lond. Med. Gaz. vol. vii. p. 807.

FURTHER REMARKS, BY MR. KEY, ON MR. GUTHRIE'S WORK ON HERNIA, AND "HIS REPLY."

To the Editor of the Medical Gazette.

SIR,

MR. GUTHRIE, as I anticipated, has made a very ingenious and a very lengthy reply in defence of his opinions, and of his claims to original discovery, in the anatomy of hernia. He has not absolutely evaded entering upon the charges brought against him, but has so dexterously turned his weapons of retort against me, that I think it necessary once more distinctly point out the sum and substance of the complaints which, as editor of Sir A. C.'s work on Hernia, I have brought against him, and if possible, to winnow the chaff in his "reply" from that which really applies to the question *sub judice*.

I make three charges against him, and substantiate them by the following proofs. First, that he has placed himself, and the profession whom he addresses, in a false position, by assuming that, "according to the prevailing opi-

nion of modern surgeons, the parts through which an inguinal hernia passes or proceeds, have little or nothing to do with the causes of strangulation." Secondly, that he has claimed the muscular structure of the inguinal canal, in reference to the upper abdominal aperture, as his own discovery, when such a structure had been previously described by Sir Astley Cooper, and its especial reference to hernia had been clearly pointed out by him. Thirdly, that he does not understand Sir A. C.'s description and dissections of the parts of hernia, and therefore underrates our knowledge of the subject, by which he gives greater weight, and an air of originality, to his own descriptions.

Charge 1.—The following are my proofs that the action of muscular fibres, in causing strangulation of a hernia at the internal ring, is familiar to the profession, and had been demonstrated by Sir A. C. long before Mr. Guthrie wrote or lectured on the subject.

Having described the internal ring, in his large work on Hernia, and the transversalis muscle, he adds, "Hereby may be explained the opinion which some surgeons have entertained of the spasmodic nature of the stricture—a state which it was difficult to account for, when the seat of strangulation was confined to the external ring, or this tendinous aperture possesses no muscular action, and cannot assume the state of spasm."—Page 28, part I.

"These means (tobacco, opium, &c.), are less frequently effectual here (in the femoral hernia), than in the inguinal hernia, which is probably owing to two causes—namely, to the nature of the parts through which the (femoral) hernia descends, and the smallness of the aperture forming the mouth of the sac. In the inguinal hernia the parts are so connected with muscles that any relaxation brought on in these affects the aperture through which the hernia descends; but in crural hernia the seat of the stricture is less connected with the action of muscles, and general relaxation has but little effect on them."

"The effect of the tobacco enema in hernia depends much upon whether the hernia is situated near muscle or tendon; if it is surrounded by the former, the effect will be considerable and instantaneous."—*Lancet*, p. 464: Sir A. C.'s lectures.

The first of these remarks was made by Sir A. C. in 1804, the second in 1807*, and the third in 1826. The following remark, in reference to the cause of stricture in inguinal hernia, was made in 1827, in a note to his second edition of Hernia, which I mention to shew what idea was entertained by a pupil of Sir A. C.'s. Speaking of the transversalis muscle, I observe, "this tendinous loop or band can readily be felt by passing the finger up through the external ring, and will demonstrate one cause of a hernia becoming strangulated at the internal abdominal ring."—Page 14, Part I.

Mr. Guthrie may perhaps think that these opinions are peculiar to Sir A. C., and not entertained by the members of the profession in general. I need not tell Mr. G. how many of the present generation of medical men Sir. A. C. has instructed in anatomy and surgery; or that his opinions are shared by most of those who have received instruction from him. Although Mr. G. may not have heard of them, or read them, they are not the less familiar to those who have heard Sir Astley lecture†. Indeed, so much importance did he attach to the muscular contraction of the transversalis at the inner ring, as a cause of strangulation, that it was thought by some that he taught almost too exclusively this doctrine, and attached too little importance to the condition of the strangulated parts.

In the year preceding that in which Mr. Guthrie gave his lectures at the College, and also preceding the year of Mr. G.'s discovery, Sir A. C. wrote as follows in the work on the Testis:—

"It (the lower edge of the transversalis muscle) begins to be fixed in Poupart's ligament almost immediately below the commencement of the internal ring, and it continues to be inserted be-

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* Sir Astley Cooper published his discovery of the fascia transversalis and the inner ring in 1804, and of the fascia propria of femoral hernia in 1807, though he had been in the practice of demonstrating them for two or three years previously.

† Mr. Swan, whose testimony on this point will not be questioned, has addressed the following note to me:—

"My dear sir,—As a pupil of Sir Astley Cooper's, I think it only an act of justice to him to state, that I attended his lectures in the winters of 1810-1811, and 1812-1813, when he stated that the lower part of the transversalis muscle was the cause of stricture in inguinal hernia.—I remain, my dear sir, yours very truly,

"6, Tavistock-Square, J. SWAN."
"Nov. 20, 1833."

hind the spermatic cord into Poupart's ligament as far as the attachment of the rectus. Thus the inguinal canal is endowed with muscular contraction, which, under the action of the abdominal muscles, serves to close it, and lessen the propensity to hernia. Sometimes a portion of muscle descends from the tendon of the transversalis in the course of the linea semilunaris, to be inserted into the fascia transversalis, behind the cord and into Poupart's ligament. It is this circular insertion of the transversalis which is the cause of stricture in inguinal hernia, in the course of the canal, and nearly at the upper ring."—Page 36.

In plate 5. fig. I. he gives a view of this muscular structure of the inguinal canal, and adds, in the description—"*c c*, transversalis muscle, arising from Poupart's ligament, and passing around the spermatic cord at the internal ring; so that the fibres of this muscle appear behind, as well as before the spermatic cord, and thus the canal is rendered a muscular canal."

And in a foot note he adds, in reference to the circular arrangement of the transversalis fibres, "this is a most important provision in preventing hernia, and when it does exist, it is often the seat of stricture."

In the year following these last remarks of Sir A. C. has Mr. Guthrie the modesty, (I really cannot call it by a milder name), to write, "that it is the prevailing opinion of modern surgeons, that the parts through which a hernia passes, or proceeds, have little or nothing to do with the causes of strangulation."

Thus the writings of Sir A. C. are made by Mr. G. to pass as so many idle words; and why? because an acknowledgment of the truth, as demonstrated in the above quotations from his works and lectures, would deprive Mr. G. of the groundwork of his discovery, and leave it in appearance, as it is in fact, a baseless fabric. He prefers assuming a false position, in order to give to his writings a more decided air of novelty, and to exhibit himself in the garb of original discovery.

What answer does Mr. G. make to the above exposé of the real opinion of surgery of the present day? Through his whole reply, occupying a space of nearly eleven or twelve pages, he dismisses this charge with the following brief notice:—

"Mr. Key is exceedingly displeased with me, because I have said that in 1831 it was the prevailing opinion of modern surgeons that the parts through which an inguinal hernia passes or proceeds have little or nothing to do with the causes of strangulation. I am sorry he should be displeased, but I cannot help it: I am of the same opinion still, and may be a very obstinate person; but if my readers will consult the recollections they entertained on this subject in Feb. 1831*, when the lecture was delivered, (and my paper alludes to nothing written since that period), I suspect many—nay, most of them, will agree that they also hold such opinions."

I am perfectly willing to leave this question of priority to the decision of the candid members of the profession.

Charge 2.—This is so mixed up with the first charge, and his claim so obviously admits of being refuted by the proofs extracted above, that I shall only state the charge as made in my remarks.

Mr. G., in 1831, lays claim to the discovery of the muscular structure of the inguinal canal, when such a structure had been demonstrated by Sir A. C. in 1830, in the following words:—"The opinion that this opening is in many instances a muscular one, was, I believe, first advanced by myself; having always maintained that point since the year 1816, although I had not been able to give a demonstrative proof of it until the delivery of my lecture in the theatre of the College of Surgeons."

Here is a distinct claim put in by Mr. G. to the discovery and descriptions of Sir A. C. What a fortunate circumstance for Mr. Guthrie that the publication of Sir Astley Cooper's delineations and descriptions of the muscularity of the upper opening of the inguinal canal should take place just the year before Mr. Guthrie's lecture at the College! What a confirmation of Mr. G.'s opinions! How satisfactory to him to find all that he wanted, to complete his discovery, described ready to his hand! In 1831, he accordingly lectures on the subject of hernia, and takes an opportunity of expatiating on the discovery he has made. Thus much for the equity of Mr. Guthrie's prior claim to the discovery of the muscularity of the upper abdominal opening,—a priority that Mr. G. establishes by stating that he dis-

* It being recollected by your readers that in 1830 Sir Astley Cooper's last work on the subject was written.

covered that, in 1831, which (to use Mr. G.'s phrase), every dog that runs the streets could ascertain (provided he could read) had been discovered in 1830.

I cannot place the force of his claim in a stronger light than I have done in my "remarks." He first claims the muscularity of the superior opening of the inguinal canal, in the teeth of Sir Astley Cooper, and then subsequently adds, "the opinion that this opening is in many instances a muscular one, was, I believe, first advanced by myself; having always maintained that point since the year 1816, although I had not been able to give a demonstrative proof of it until the delivery of my lecture in the theatre of the College of Surgeons:" which, being interpreted, means, that from the year 1816 he had entertained the opinion promulgated, or rather demonstrated, by Sir Astley Cooper in 1804—that muscular action exerted an influence on the inner abdominal aperture; but that he had not been able to demonstrate the nature of the muscular apparatus until the year 1831, being the year following the appearance of Sir Astley Cooper's work on the Testicle, in which the muscular fibres of the canal had already been delineated and described.

Mr. Guthrie answers this charge by professing to differ somewhat in his views of the muscular fibres. Of such nice distinctions I again profess myself unable to judge with any degree of accuracy. If Mr. G. wishes to raise up a character for erudite anatomy by splitting hairs or the transversalis muscle, he may, so far as I am concerned, rest in undisturbed possession of his distinction. I am not here writing to settle differences of opinion; that is the business of a reviewer. I am standing forward, as bound by duty, to protect the claims of Sir Astley Cooper as an author from depredation. Whatever peculiarity of opinion Mr. Guthrie may hold—and his work abounds with strange peculiarities—I have no wish to disturb. It is not a difference of opinion that I am contending about, but for a priority of claim: to this latter point Mr. Guthrie makes no definite answer.

The third charge which I have to make against Mr. Guthrie is one of minor importance compared with the two former. They involve a charge of no slight import to a man who values his character for fair dealing. The present I should not have entered upon, as it is rather a difference of opinion as to matters of fact, which any man may entertain without being accountable for such opinions; but there is so much profession of regard for Sir Astley's opinion—so much shew of delicacy, and even hints of forbearance towards him—that it becomes necessary to shew that he is not much acquainted with the dissections which Sir Astley has made in elucidation of the structure of femoral hernia.

I do not observe a single allusion to Sir Astley Cooper's work on *Hernia* in the whole of Mr. Guthrie's performance; and he takes especial care to have it understood that he has made no reference to it: for instance, page 16, he says, "the statement said to be made by Sir Astley Cooper," as if he had not written upon the subject, but his opinions were to be taken at second hand. Whence this affectation of studiously avoiding consulting Sir A. C.'s work?*

The reason is pretty clear. He has, instead of making himself acquainted with Sir Astley's views of the structure of the sheath, given a plate said to be from a dissection by Sir Astley Cooper. Nothing but the strongest assurance from Mr. Guthrie could have made me believe, that so imperfect a view of the structure of those parts could have proceeded from the scalpel of such a master. Mr. Guthrie cannot surely believe that this affords a view of Sir Astley's dissection of those parts. Only let him compare it with the beautiful and elaborate dissections as displayed in his large work on Hernia. In this plate of Mr. G.'s, there is not a single point made out. It must be a burlesque of Sir Astley Cooper's opinions. The connexion of the fascia transversalis and its formation of the sheath universally form a part of his dissection, and are points he particularly insists upon in all his demonstrations of the anatomy. If Mr. G. had sought a mode of bringing Sir A. C.'s opinions into contempt, he could not have hit upon a happier one. As a standard of what Sir Astley has done on the subject of hernia—for such, I suppose, Mr. G. wishes it to be regarded—it is ludicrous.

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* In order that Mr. Guthrie might understand his views of hernia, Sir Astley Cooper requested me to send a copy of his folio work to the library of the College of Surgeons. This was about the time when Mr. Guthrie was writing his work, and Sir Astley expressly stated to me that he wished Mr. Guthrie to have a clear understanding of his dissections.

With this drawing before him, as containing Sir Astley's ideas upon the subject, it cannot be expected that Mr. G.'s acquaintance with Sir Astley's opinions can be otherwise than imperfect. If he wished to become acquainted with them, he might have readily obtained his object by referring to his long-recorded opinions upon the subject. He would have discovered, that our knowledge of the matter, as represented by Sir Astley Cooper, has been not much, if at all, improved by the more modern researches of foreign anatomists. Mr. G. would not then have stated, that, "by a little management in dissection, it (the septum crurale of Cloquet) may be made to assume a funnel-like shape on the thigh."—Page 3. This is, I presume, an oblique blow at Sir Astley's funnel-like description of the same structure. If so, Mr. G. quite misapprehends Sir Astley's dissection. The funnel shape of the sheath is one of the most defined points in the anatomy of femoral hernia; by no legitimate dissection can it be made to present any other form. It requires no management to produce it. But Mr. G. mistakes; it is not upon the thigh that the funnel shape is seen: it is only by dissecting the inner portion of the fascia transversalis, where it is attached to the pubes, and descends from thence around Gimbernat's ligament, that the true shape of the sheath can be exposed to view. I am satisfied that Mr. Guthrie wholly misapprehends Sir Astley's view of this structure.

It is upon this misapprehension that is founded Mr. G.'s objection to the opinion, that a femoral hernia enters the sheath when it quits the abdomen. It is in vain for me to render this intelligible to him: his conception of the anatomy of the structure between the femoral vein and Gimbernat's ligament is, in my view, so imperfect, that I must despair of making it clear to him by any verbal description. It is his want of acquaintance with Sir Astley's descriptive anatomy that makes Mr. G. prefer that of the French anatomists: the works of these latter he has consulted; that of Sir Astley he has wholly avoided*.

A better acquaintance with his discoveries and his descriptions of femoral hernia would also have told Mr. G. that it is not the prevailing opinion of modern surgeons, that a femoral hernia has behind it the fascia lata. I can assure him, notwithstanding his opinion to the contrary, that such an opinion is peculiar to him. A femoral hernia has behind it not only its sac, but also the posterior part of the sheath formed by the junction of the fascia transversalis and iliaca, which latter forms the back part of the sheath in its normal state.

Mr. G. might also have learned from the same source, that it is not owing to the small vessels given off by the femoral artery that a femoral hernia ascends over Poupart's ligament, "instead of making its way down the thigh like a psoas abscess." He would have found the true reason described there; namely, that the sheath naturally yields most readily in that direction, and the attachment of the superficial fascia is also such as to prevent its descent upon the thigh. I would here take the opportunity of adverting to a singular opinion which he attributes to the French anatomists:—"When the French anatomists say that the hernial sac is protruded into the superior opening of the crural canal, takes the course of the canal, and reappears at its lower opening, or where the vena saphæna joins the femoral vein, it is only intelligible by understanding that the hernial sac lies in contact with the femoral vein," &c.—Page 32. I have a better opinion of the French anatomists than to suppose that they could describe a femoral hernia as descending to the junction of the saphæna vein with the femoral. It is a statement so utterly at variance with the fact, that I am inclined to think that it could only have existence in the "vivid imagination" of Mr. Guthrie.

Another point, which a reference to Sir Astley's work might have somewhat improved, is the situation of the stricture in femoral hernia. Mr. Guthrie, probably under the impression that this is also a prevailing opinion, though, in reality, it is peculiar to him, says, that "the stricture is formed by the fascia lata." This is a very old opinion, which, from its unsoundness, has been long exploded. It is founded on error; and the reason of Mr. Guthrie's entertaining such an opinion seems to me to be, that he does not understand his very clear demonstration of the sheath where it joins the under

* In saying that Mr. G. has avoided consulting Sir A. C.'s work, I of course allude to that on Hernia. Mr. Guthrie has taken advantage of this, and represents me as denying that he has quoted Sir A. C.'s work on the Testicle. He must be aware of my referring only to the work on Hernia.

part of Poupart's ligament. Mr. G. knows full well, that it is not Poupart's ligament that forms the stricture; and not being acquainted with the band that unites the sheath to the crural arch, he has recourse to the fascia lata as being the only part to which he can refer the stricture. The true seat of stricture, as Mr. G. will find described in Sir Astley's work, is in the band that forms the fore part of the sheath, and joins it to the under part of the crural arch. This band, which is continuous to the pubes, and is a continuation of the inner portion of the fascia transversalis, is alone sufficient to set the stamp of truth on Sir Astley Cooper's description of the sheath of the femoral vessels.

Mr. Guthrie, instead of giving any direct answer to the above charges, very dexterously turns round upon me, and accuses me of misquoting, and thereby misrepresenting him. If I have done either, I assure him that nothing was further from my intention. The accusation, however, he has enlarged upon, and places himself before the profession as an injured man — as one who has been grossly misrepresented and traduced. There are four charges of misrepresentation brought against me; two of them are in italics in Mr. Guthrie's reply, one in capitals, and the fourth occupies a very large part of his paper in the Gazette.

First charge seems to consist in my falsely asserting, that he has taken the descriptions of the authors whom he quotes from Mr. S. Cooper's Surgical Dictionary. I have said so in order to explain the mistakes he has been led into by not referring to Sir Astley Cooper's work on Hernia; but I have also been induced to say so, because Mr. Guthrie has said in substance the same thing. Page 3, he says, " that it may not be considered I am combating a shadow, I shall first show what are the opinions of some of the ablest anatomists, who have written on these points, and then proceed to develope my own. Mr. S. Cooper, whose Surgical Dictionary may be justly consulted as a summary of the opinions of the principal surgeons in Europe, has given in the last edition of this work (1830,) page 653, the following account of the anatomy of the parts concerned in inguinal hernia, compiled with especial reference to the works of Sir Astley Cooper, Messrs. Lawrence, Scarpa, Hesselbach, Cloquet, and Langenbeck." Mr. Guthrie then gives a quotation from Mr. Cooper's Dictionary, occupying about a page and a half, as a summary of the opinions of the first surgeons in Europe. Again, page 16, when speaking of direct hernia, he again quotes Mr. Cooper's Dictionary for the opinions of the same authors: — " Mr. S. Cooper gives (page 660 of his Dictionary) the opinions upon this point of Messrs. Hesselbach, A. Cooper, Cloquet, Lawrence, and Stanley, leaving it, however, undecided whether the covering or investment is or is not formed, as, he says, Sir Astley Cooper is reported to have described it in his Lectures, viz. one half by the tendon of the transversalis and the other half by the fascia transversalis." On the strength of this quotation, he proceeds to criticize Sir Astley Cooper's description. Again, page 30, he introduces the subject of femoral hernia, thus: — " The points on which I wish to remark with reference to femoral hernia are few; and on referring to Mr. Samuel Cooper's Surgical Dictionary for the existing state of opinions on them, I find the accounts, as given by Hesselbach and Langenbeck, so prolix, as to be almost unintelligible to persons not already well acquainted with the subject. I shall, therefore, refrain from quoting them, and only notice those which are most commonly received or remain a matter of doubt."

If such a mode of gathering an author's opinions, and such a reference to Mr. Cooper's Surgical Dictionary, be not a sufficient justification of my complaint that Mr. Guthrie takes his authors at second hand, I know not the meaning of language. It is true that he has given an original quotation from Cloquet and one from Blandin; but not one from Sir A. Cooper's work, either on inguinal or femoral Hernia. The quotation which he makes from Sir A. Cooper, is from his work on the Testicle; but to that work which contains his complete views of the whole anatomy of hernia, Mr. Guthrie makes not the slightest allusion. He must be aware that, in charging him with studiously avoiding all reference to Sir A. Cooper's work, I can only allude to his work on Hernia; and this is the reason of my saying that he is shy of consulting Sir Astley Cooper's writings*.

* Let it not be supposed that I mean the slight-

Charge second is, that I have misquoted a paragraph, and made it nonsense. This is too good an opportunity to be lost; and, in order to make it more conspicuous to the reader, Mr. G. has had the error printed, not in italics, but in large letters *. I have, in transcribing the passage from his work, accidentally written the word muscular instead of circular. I do not see how such a mistake makes the sentence nonsense; and now the error is repaired, the meaning of the sentence and of the context is still not clear to me.

The third charge of misrepresentation is, that in endeavouring to make out the distinction between Sir Astley's description and Mr. Guthrie's, I have said that I believed Mr. G. to have found them more circular than Sir Astley Cooper had described them. It appears that I am wrong; for Mr. Guthrie says that he has written exactly the reverse: "that the fibres alluded to were not circular, but straight." A mere difference of opinion, or of description, between these two authors, is not a subject on which I have any wish to comment; and if it be any atonement to Mr. Guthrie for the offence of misunderstanding him, I beg to say that I am willing to admit that they are either straight or circular, or, if he pleases, both.

The fourth charge, which brings down the whole weight of Mr. Guthrie's displeasure on me, is, that I have wrongfully charged him with want of courtesy and fairness towards Sir Astley Cooper. The proper way of shewing his respect to Sir Astley Cooper, would have been to have treated his opinions and his works fairly. †Mr. Guthrie has not done this, and he must, on reflection, be aware that he has not. He asserts, in his "reply," that he has given all that Sir Astley Cooper has said on the subject! "I must beg the reader to pause, and to ask himself what man can do more to another, than to give every word he has said on the subject in question? I ask again, can any man wish for more, in an inquiry, than to have *all* he has written distinctly laid before the judges? Is it possible that a man who acts in this way can be accused of not having referred to the original author? I should have thought not; but Mr. Key, through inadvertence, has done it." And in what does the reader suppose that this "all" of Mr. Guthrie's—this summary of Sir Astley Cooper's opinion—this "every word that he has said on the subject," consists?—why, in one paragraph from his work on the Testicle, giving an account of the inguinal canal in reference to the course of the cremaster and spermatic cord, and the engraving. This "all" contains not one word or one allusion to his work on Hernia; and yet he is displeased with me, and charges me with misrepresenting him, because I accuse him of not referring to Sir Astley Cooper's work on the subject of Hernia. It is demonstrably clear, therefore, that my original charge against Mr. Guthrie, of not reading the work in question, is substantial and just.

But it seems that meetings have taken place between Sir Astley Cooper and Mr. Guthrie, and also several conversations, on the subject of hernia; that he has, out of delicacy to him, consulted him, and endeavoured to make himself master of his opinions before he published his book. It is not for me to say what private conversations have taken place between these gentlemen, nor what was their nature. The report of them rests entirely on the word of Mr. Guthrie. But I must beg leave to doubt whether any conversations with Sir A. Cooper could lead to the results which Mr. Guthrie's account would imply. If we are to credit Mr. Guthrie's report, it appears that he has the sanction of Sir Astley Cooper to every word that his work contains; *that Sir Astley Cooper

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est disrespect to Mr. Samuel Cooper. I have always considered his Surgical Dictionary as the most useful work on surgery in the English language, and as containing the most able and fair digest of the authors' opinions whom he quotes.

* Medical Gazette, p. 254.

† While the unpleasant task has fallen upon me thus to express my sense of Mr. Guthrie's treatment of Sir Astley Cooper, it is gratifying to observe, as it is to acknowledge, the liberal course pursued by such men as Lawrence, Samuel Cooper, and Cloquet, in their works on the subject.

* Mr. Guthrie says that the proof-sheets of his work were placed in Sir Astley Cooper's hands for correction. Did he read them? Sir Astley is known to be rather a worker than a reader; and he might, in confident reliance on Mr. Guthrie's honour, after the conversations they had had together, have neglected to read the work; and he was fully justified in supposing that his opinions would be respected and his discoveries acknowledged. Or, if he read them, he might feel some hesitation in taking upon himself the responsibility of correcting the work of another, particularly a work so replete, as Sir Astley could not but discern, if he read it, with inaccuracies of fact and opinion. At all events, the work seems to have been returned to Mr. Guthrie without revision or comment, except on one unimportant point.

was consulted before it went to press, and was invited to make any alterations he chose. Will it be, can it be, believed, that Sir Astley Cooper has been accessory to the degradation of his own reputation, by giving his assent to the correctness of Mr. Guthrie's statements? Is it possible that he could admit Mr. Guthrie's claim to the discovery of the muscularity of the inner ring? Is it possible that he could assist Mr. Guthrie in overthrowing his own reputation for originality in his descriptive anatomy of hernia, a point that he so much values? Is it likely, I would ask, that he should himself quietly yield the labours of many years—labours which, it is well known, have been the foundation of his character? Is it probable, or possible, that he would himself falsify his own statements? Is it likely that he would surrender into Mr. Guthrie's hands nearly the whole of his discoveries in the anatomy of inguinal hernia? According to Mr. Guthrie's account, he must have acquiesced in all this. The solution of this is, indeed, difficult. Either Mr. Guthrie must be in error, in using Sir Astley Cooper's authority in the way he has done, or Sir Astley Cooper must have acted in a manner altogether at variance with human principles and human feelings, and have sacrificed his reputation out of delicacy to Mr. Guthrie. The plan of appealing personally to an author, instead of his work, is novel; it affords Mr. Guthrie an opportunity of interpreting pretty largely the opinions of the author. Sir Astley Cooper probably thought, that by giving personally to Mr. Guthrie his views of the anatomy of hernia, he should avoid the chance of being mistaken. The reverse has been the case; by giving him verbal interpretations of his views, he has afforded Mr. Guthrie an advantage which the latter never could have obtained if he had been referred to the printed work. The purport of a conversation passes away, or is remembered only by Mr. Guthrie; who would, naturally enough, only burden his memory with such parts as bore a favourable view on his side of the question. But a conversation, if ever so impartially reported, cannot set aside the published opinions of an author. Mr. Guthrie may think otherwise. The ingenuity of the plan cannot be doubted. Even he must smile as he reads this.

Mr. Guthrie thinks that I have as little respect for Cloquet as he says I have for the author of the Surgical Dictionary. He can have read to very little purpose if he thinks so. I have long ago given my opinion of Cloquet's "Récherches Anatomiques," and have acknowledged his candid dealing towards Sir Astley Cooper. My opinions of Cloquet had been put on record when Mr. Guthrie's ideas of hernia, according to his own account, were in a state of pupillage under Sir Astley Cooper.

The taste of Mr. Guthrie, in preferring the French account (Cloquet's), as being the most elaborate, to the works of his English contemporaries, may be questioned; but as that is a matter of opinion, I have nothing to say to it: an opinion that, in Mr. Guthrie, is easily accounted for by the circumstance of Sir Astley Cooper's work being unknown to him. The appeal to chivalry, made by Mr. G. comes rather with a bad grace from him; he must be sensible that his conduct towards his friend and associate would, in an appeal to a court of chivalry, endanger his spurs being knocked off. Nor is his lamentation over the state of the profession better timed: with him, I regret that any personal expressions should be used by the members of our profession; but I am more sorry that there should be any cause for them.

Mr. G. complains that I have insulted him, and hopes "that I shall lose no time in retracting, in the strongest manner, the insulting expressions I have made use of" towards him. I have made use of no expressions that can be termed insulting. Disagreeable truths are often felt as insults by those to whom they are addressed. In his cooler moments, Mr. G. will perceive the difference. When he has the candour to relinquish claims to which he has no sort of pretension, I shall be ready to recal any expressions that may be grating to his feelings—but not till then.

I beg to return Mr. Guthrie thanks for the personal civility he has shewn me in his "Reply." Whether Sir A. Cooper feels equally satisfied with the compliments paid to him, at the expense of his understanding, is not for me to judge. It is, I think, little less than adding insult to injury. His just claims are disallowed—his discoveries appropriated, and his descriptions set at nought, by his friend Mr. Guthrie; who thinks to heal the wounds he he has inflicted in his reputation by words of flattery and

of compliment. Sir Astley Cooper is not a man to be satisfied with empty words; he exacts from his friends, on such occasions, a manly and open statement of the truth—it is all he can wish or require.

In taking a final leave of Mr. Guthrie, may I beg him, should he honour me with any farther notice, to bear in mind that there are but two points in the whole controversy that really require any answer; these are the two first charges in my present remarks—viz. to whom belongs the priority of claim to the muscular action at the internal ring; and the demonstration of the fibres producing such contraction—setting aside all points of opinion, but confining himself to the question of fact. To them may I beg a direct answer? And Mr. Guthrie will perhaps forgive me if I take the liberty of hinting, that he may yet learn something on the subject of hernia from those English authors whom he holds so cheap.

Your obedient servant,
C. Aston Key.

18, St. Helen's-Place,
Nov. 19, 1833.

PHTHISIS CURABLE—MR. MACLURE AND DR. M. HALL*.

To the Editor of the Medical Gazette.

Sir,

Anger is said to begin in folly and end in repentance. Whether the passion into which I have unintentionally thrown Dr. Hall does, in its origin, justify, or is yet by its end to approve this maxim, time must try. Very confident prognosis is a ticklish thing. But as Dr. Marshall Hall has, in your journal of last Saturday, uttered sundry accusations against me, you will perhaps spare me a page or two, whilst I endeavour to set myself right with your readers.

First, then, I may remark, that the illiberal sneer about "Mr. Maclure and his pauper patients," becomes *well* the man who was favoured by Mr. Maclure with a good deal of lucrative employment. *Why* I may no longer avail myself of Dr. Hall's assistance, no one knows better, or has more cause to regret, than himself; but it is needless at present to say more on this point.

As to my having been guilty of a breach of etiquette by disclosing Dr. Hall's prognosis, sure I am I have done nothing which is not daily practised by eminent men, when it is meant to serve, as in my case, a scientific end. Thus, not to quote many examples, Dr. Baillie*, in his "observations on a strong pulsation of the aorta," broadly states, that "Sir Cæsar Hawkins and Mr. Bromfield told him (the patient) that it was an aneurism of the aorta, and that Dr. Hunter said he did not know what it was." Moreover, Dr. Hall himself, has on one occasion done †, and on another sanctioned in a friend ‡, the very thing he condemns in me.

The truth is, I do not see how the value of any suggestion is to be estimated, except by shewing that the thing suggested succeeded better in the hands of its propounder than some other thing did in the hands of some *known* authority. My object in mentioning Dr. Hall at all was simply this—in stating the importance of the pulse as an element of prognosis in phthisis, I meant to shew its value by the fact that it had enabled so humble an individual as myself to deliver a juster prognosis than the stethoscope in the hands even of Dr. Hall had enabled him to do. How great must be the vanity which could desire a higher compliment than this!

Dr. Hall denies that he declared that my patient must shortly die. In answer to this, I assert that Dr. Hall predicted that Jones would die during the winter then succeeding, viz. that of 1831-32. It is strange that if I had committed any mistake in this statement Dr. Hall should not have set me right, when I read the paper before the Harveian Society nearly two years ago. Upon that occasion he admitted ALL I HAD SAID TO BE TRUE, and did not exhibit any of that displeasure which the publication of the paper has engendered. On the contrary, he took it all in good part, and facetiously remarked, that the case reminded him of the consultation betwixt Gil Blas and a physician, the result of which was that their patient recovered, but Gil Blas, the erring party, insisted that he *ought* to have died. That Dr. Hall, like Gil Blas,

* This controversy has become so entirely personal, that it can no longer be of interest except to the parties, and we must therefore decline continuing it. It may be proper to state, that Mr. Maclure's reply was considerably longer, and in his opinion more complete, but that, in deference to our request, he was so obliging as to curtail it.—Ed. Gaz.

* Works, by Wardrop, Vol. I. p. 25.
† On a Morbid Affection of Infancy, p. 38.
‡ Ibid. p. 25.

has been shewn by the event to be wrong in his opinion, I am far from imputing to him as a fault. I was not aware till now that his pretensions reached quite so far as infallibility. Philosophical physicians have none of Dr. Hall's morbid sensibility: *they* are always forward to avow their occasional want of accuracy and success in opinion and practice. It is this chiefly which gives us confidence in their statements, when they relate successful practice.

Dr. Hall makes a great parade of his French learning, and introduces a great mass of it into his lucubrations, without thinking that by so doing he forces people to make disagreeable comparisons. He does not seem to be aware that there is any reproach in the circumstance of a physician of his years and pretensions being obliged to swear so servilely in the words of a foreign master, and to avow his having derived his knowledge of a disease, so common in his own country, solely from foreign sources. And so conceited is he of this sort of learning, that he even makes it a matter of implied censure upon me, that I have not loaded my paper with long quotations from French pathologists, nor made more frequent allusions to their works, though to all but Dr. Hall it must be clear that the tenor of my remarks implies a knowledge of the best English as well as French writers, and that every idea expressed coincides with what he quotes.

But in my turn, if I, against my will, were to imitate the Dr.'s mode of proceeding, I might charge him, from what he has said, with having only a partial knowledge of his boasted authorities. He tells us, "he declared that which a physician *intimately* acquainted with the recent works of Laennec and Andral, and who had detected well-marked pectoriloquism, with the other signs of phthisis, must declare—viz. that the case was one of ulcerated, tuberculous cavity, and therefore a fearful one," &c. Now it is plain, from the tone of this passage, that Dr. H. is unconscious of the fact that pectoriloquy, according to Andral, is NOT a sure proof that the ease is one of "ulcerated tuberculous cavity." In his eighth observation*, Andral details a case in which "Il y avait pectoriloquie evidente," as to which (not thinking it dishonourable to publish the mistake of his *only* COLLABORATEUR), he says, "M. Lerminier regarda ce malade comme atteint d'une phthisie pulmonaire, dont la marche avait été lente. La nature des crachats et la pectoriloquie paraissaient indiquer que des cavernes étaient deja formées." The man having died, the dissection did *not* shew an "ulcerated tuberculous cavity." "N'était autre chose qu'une dilatation considerable d'un rameau bronchique." It seems, then, that Jones's case *may* after all have been chronic bronchitis, and that Dr. Hall *may* have been as far wrong, trusting to the stethoscope alone, in his diagnosis, as in his prognosis.

As to the "fausse convalescence," as applied to cases of recovery from phthisis, I am not sure of the accuracy of the term, though in my paper I recognize the possibility of Jones's cure being only temporary; and for the same reasons, too, that Laennec states, in Dr. Hall's last quotation. What! is recovery from a disease, be it gout, phthisis, or any other hereditary malady, to be called only a "fausse convalescence," if after its symptoms have been developed, a removal of these take place, and the patient continue in good health, until the occurrence of another distemper? Why, we should never have a recovery at this rate; and a man having two attacks even of pleurisy, with an interval of fifty years between them, must not be said to be cured of the first, because, forsooth, it may have made him more liable to the second!

I will not retort further on Dr. Hall, by supposing him ignorant of Dr. Heberden's work: that physician, he will recollect, anticipating Laennec's question—"La guerison de la phthisie, est-elle possible?" narrates the following case:—"Summus etiam ille medicus Edvardus Wilmot eum nondum vigesimum complevisset annum tabe adeo ægrotabat, ut quod ipse mihi narravit, non solum propinqui sed etiam expertissimi medici de salute ejus desperarent; vixit tamen, viguitque nonagesimum annum egressus*." And if Dr. Hall be acquainted with Dr. Young's monograph on phthisis, he may recollect that that physician was in his youth affected with well-marked symptoms of consumption, yet he recovered, and died of another disease at an advanced age. Are we to call both these cases, as well as Jones's, now of two years' duration, only so many instances of "fausse convalescence?"

Lastly, as to the alcoholic lotion, the

* Clinique Médicale, tome i. p. 197.

* Commentarii de Morb. p. 324.

"breast-plate" of Dr. Hall, I confess I am sceptical as to its utility, at least in effecting the *local* purpose contemplated by its patron. I suppose it is used to lessen the heat of the parts within the thorax, which are in a state of morbid action. But when it is considered how remote from the surface the seat of disease is, I question its power to cause any notable change of internal temperature. It was mainly for this reason I soon gave up its use, and began to treat Jones constitutionally, by still more bracing and conservative means.

It is strange that Dr. Hall should attribute so *much* to his lotion, employed, though it be, with such extreme nicety, whilst he ascribes so *little* to the other remedies, which, borrowed without acknowledgment from my friend Dr. Steuart, of Erskine, he wisely conjoins with it; namely, "a mild animal diet, regulated bowels, early hours, flannel, sponging, and exposure to the air: to these being added, constant journeying or sailing." Truly, this stroke of etiology rivals that of the alderman, commemorated by Gray, who after living forty years on the fat of the land, (not milk and honey, but arrack punch, and venison,) and losing his great toe with a mortification, said to the last that he owed it to TWO GRAPES, which he ate one day after dinner.—I am, sir,

Your obedient servant,

WM. MACLURE.

14, Harley-street, Nov. 13, 1833.

PROFESSOR GRANT AND MR. WAKLEY.

To the Editor of the Medical Gazette.

SIR,

You have repeatedly taken occasion to allude to the connexion between certain Professors in the London University and the radical portion of the medical press, expressing your belief that there existed an understanding between the parties as to the system of reciprocity in puffing each other. If any of your readers imagined that this was done on insufficient grounds, they will probably now be undeceived, Dr. Grant, the learned Professor of Comparative Anatomy, having with more boldness—or with greater simplicity, than some of his colleagues, thrown aside the mask. That gentleman so overflows with gratitude for "ANOTHER instance of kind attention—he might *almost* say partiality," which has been shewn them, that he has made, not the publication only, but the individual by whom it is edited, the subject of eulogy and recommendation to his pupils from the professorial chair! Extraordinary as such proceeding would, under any circumstances, have been, it is probable that I should not have noticed it had the indiscretion been merely the first ebullition of gratified vanity, in consequence of the manner in which his name had been mentioned in certain advertisements of the Lancet; or had it been confined to the class-room; but when Dr. Grant, after a lapse of several weeks, has suffered these sentiments to go forth to the world with his own deliberate revision, then do they become public property, and amenable to public criticism. Dr. Grant, then, in humble gratitude for the "kind attention" and "partiality" shewn by their patron to himself and colleagues, commended him by name to his pupils, in terms such as assuredly were never bestowed upon him before, except in irony. He calls him—"Mr. Wakley, the indefatigable and *learned* Editor of a publication familiar to you all * * * A CASTIGATOR OF EVIL DOERS, AND A REWARDER OF THE GOOD"!!! Such are the words, deprived, in the retirement of the closet, of any thing *de trop*, which might have been uttered in the excitement of the moment.

From this we gather, that in Dr. Grant's opinion, Wakley's "castigations" have been directed against the "evil-doers," in such manner as fully to meet his concurrence; and that his "rewards" have shewn like discrimination, inasmuch as they have been bestowed upon the "good." When the learned Professor next introduces such discursive subjects to his pupils, perhaps he will explain to them what particular part of his patron's exertions, in those respects, has most excited his admiration. Is it his conduct towards his late, and some of his present, colleagues?—his insolent mockery of Sir Charles Bell?—his persecution of Dr. Conolly?—or the contumely he has heaped upon Dr. A. T. Thomson? or is his approbation most strongly excited by Wakley's efforts to keep down the rival school in the Strand? or is his admiration warmest when he contemplates the picture given in the Lancet of those connected with our hospitals?—the treatment of Abernethy,

Astley Cooper, or Sir W. Blizard?—of Brodie, Travers, or Keate?—of Earle, Tyrrell, or Stanley?—of B. Cooper, Guthrie, or Mayo?—in short, of almost every surgeon in the metropolis connected with an Hospital School, who has acquired any degree of professional celebrity? Or does the worthy Professor contemplate only those cases in which the amiable Editor has been the patron of modest merit?—let him enumerate, then, those instances in which, with the exception of his own particular case, he has proved himself "the rewarder of the good," as regards any existing physician in London, except Dr. Elliotson—or any surgeon, except Mr. Wardrop! Perhaps he will also point out to his pupils what part of Mr. Wakley's conduct he considers as chiefly meriting their applause;—what portion of his career, from his first attracting attention, in consequence of the destruction of his house by a still undetected incendiary, to his *fourth* conviction for libel in a court of justice, he would especially recommend to their imitation.

The only charitable explanation, sir, of all this is, that Dr. Grant did not *know* the character of the publication of which he spoke; I therefore take leave to inform him that he has expressed his approbation of a paper *which has existed by slandering his brethren—which has systematically dealt in libel and falsehood—which has violated every principle of professional etiquette and honour—and which has not scrupled, when it served the purpose of the moment, to have recourse to forgery*—aye, sir, FORGERY is the word: to which long list of literary virtues, I have to add, that of ribald jesting on holy things, and blasphemous derision of the sacred truths of Christianity! Such are a few of the characteristics of the publication which Dr. Grant has represented as the "rewarder of the good,"—SLANDER, FALSEHOOD, FORGERY, and BLASPHEMY! and I leave it for others to decide whether these be qualities which entitle a work to the praise of those entrusted with the care of public education, and holding the responsible situation of the instructors and the guides of youth. With this I take leave of Dr. Grant; nothing doubting, after what I have said (and of the truth of which he may easily satisfy himself), that he will concur in the observations you lately made in one of your leading articles—"they who, to gratify some petty vanity of their own, give their support to a publication in which malice stands bare and hideous, the still conspicuous and glaring motive of animosities the most rancorous, and personalities the most degrading to literature and to science—such persons, we say, *are* TRAITORS *to their* profession."

I am your obedient servant,
ONE OF PROFESSOR GRANT'S
"EVIL-DOERS."

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

First Lecture of the Course on Comparative Anatomy, delivered in the Theatre of the Royal College of Surgeons [in Ireland]. By A. JACOB, M.D. one of the Professors of Anatomy and Physiology.

THE introductories of Dr. Jacob have for some years been famous in the Irish metropolis for their remarkable homeliness of phrase and manner; the topics, too, discussed in them, have generally made them quite a *bonne bouche* for the reporters of the Dublin newspaper press—a medium through which we have been hitherto obliged to form our opinion of the Doctor's merits. We have him now, however, coming forward, of his own gracious accord, on a subject of practical and general interest, which will enable a much larger class of readers to estimate his proper worth. He would be more at home, we know, on his favourite subjects of apprenticeships, and the exclusive virtues of his own wonder-working College; but until he gratifies us (as perhaps he will on some future day, should we be duly grateful for present favours,) with a published introductory—a *chef-d'œuvre* in his very best style, on his own peculiar theme—we suppose we must only be thankful for that which he has here condescended to give us—his First Lecture on Comparative Anatomy.

The lecture is short and sweet, and what is better, it speaks for itself; it requires few glosses or comments from us to render its beauties appreciable. We shall therefore, as we cannot give the *whole* production, point out such parts of it as greatly excited our admiration in the perusal.

The burthen of this unique lecture, we should observe at starting, is to shew

the importance, and to deplore the neglect, (in Ireland—or rather in the Irish College of Surgeons), of comparative anatomy. The cause of this negleet is briefly and gracefully hinted at in the following passage:—

"Ask me," says Dr. Jacob, "what retards the cultivation and diffusion of comparative anatomy. I dare not answer. Suffice it to say, the old story is more comfortable, more suitable. *Young gentlemen, attend to what I say.* Keep pace with the times; be not satisfied with equality or mediocrity, aim at excellence, and above all things *bear in mind the fable of the fox without a tail!*"

In order to understand this elegant allusion, it should be known that among the Doctor's hearers, at the lecture, were the President and members of his College; these are the *foxes without tails.* Indeed, he addresses them direetly, and with more apparent respect, in the opening sentence:—

"As many of those to whom I now address myself are unacquainted with the nature and objects of the lectures whieh I am about to deliver, I will [shall], Mr. President, with your permission, and that of the other members of the College who have honoured me with *their* presenee here to-day, explain briefly *their* purpose and probable consequenees."

The leeturer then proceeds to show how, by the cultivation of comparative anatomy, "a spirit of inquiry and *exercise of mind is* [are] *elicited* among the more *talented* students, whieh the less interesting study of the details of human anatomy might leave *dormant.*"

We find him next taking oceasion to remark, that there ought to be some alteration in the names of these studies. "The term comparative anatomy," says he, "has been used in contradistinction to the term human anatomy. Let us in future call the former *anatomy*, and retain *the epithet* for the latter." From which we infer that he wishes to call human anatomy "comparative;" but we will not be positive as to his meaning, for he has left it *in ambiguo, which* epithet he would retain.

Consistently with his object, he wishes to impress upon his hearers, that the study of man's structure has nothing peculiarly surprising in it, compared with that of *other* animals. "It must," says he, "never be forgotten, that he (man) enjoys *no superiority of organization* over the mass of his fellow-animals; *his distinction is his* MIND." But what the leeturer means by the *mind* of man is explained in the next paragraph; there we find him saying—"His great BRAIN, with its deep convolutions, extending over the cerebellum, eonstitutes, as I have already observed, *his proud and characteristic distinction.*" From which we conclude that Dr. Jacob is a professed materialist.

Although, however, according to our lecturer, man has no superiority of organization over other animals, except in his brain, yet pains are taken in the two subsequent paragraphs to show, that the human animal has "certain peculiarities of organization not to be overlooked." And what thinks the reader is the first peculiarity of man selected by the lecturer? "He is *the only biped,*" says Dr. Jaeob; upon which we could not help thinking that the Doetor was strangely forgetful of the faet known to every school-boy, of Plato's confusion when the cynic introdueed a eock into the academy. But Dr. Jacob repeats, that man is "exclusively a biped being"—"his foot being beautifully arched, jointed, and tied, to sustain the whole weight of the body projected vertieally upon it, and with *fingers* admirably modified to adjust it to the surface"—an assertion whieh, we confess, rather startled us, when we remembered how beautifully arehed is a coek's foot, and how well calculated to support his body, and with "fingers" admirably modified to adjust it to the surface even of a pereh; in which last peculiarity, by the way, the coek has a deeided advantage over man.

Dr. Jacob allows that there is some superiority in the mechanism of the human ear, "although not to be demonstrated" (!); and he admits that man possesses the power of eommunicating ideas by distinct artieulate sounds. "Others of the class (mammalia) are provided with larynx, soft palate, tongue, and lips; but whether from inferiority of organic structure, function, *or mechanism*, none ean exereise them except *this individual.*" The Doctor, it may be noticed, is not very preeise in his terms; by this "individual," he means of eourse this speeies, or this race.

Having thus taken due pains to contradiet himself in all he said about man having no superiority of structure over his "fellow animals," he proceeds to take "a hurried glance at the skeleton," and partieularly that part of it

which constitutes "the resisting sides of the *respiratory pneumatic* machinery;" and he adds with singular emphasis, that nobody but "the man 'whose soul lives an alley' *(sic)* can view" this bony structure in all the classes of vertebrated animals, "without enthusiastic admiration." We perfectly agree with the learned Doctor; but we are curious to know whence he borrowed that apt and beautiful quotation.

There is an elegant disregard of orthography, and indeed of grammar generally, throughout this lecture; for examples of which we regret we have not room: incidentally, however, some of them may have been noticed in the preceding extracts.

After noticing the skeleton, he dwells on the organs of digestion; observing by the way that "gramenivorous" birds have a "*mascerating*" crop and a grinding gizzard. Such a crop, no doubt, must be very proper for such birds. In calling attention to the alimentary canal, he says that there are many interesting peculiarities about it, of which "the cellular apparatus in the sturgeon, and the spiral valve in sharks, affords (afford) examples." But this is not all. "The cœcum and appendix vermiformis in man, is (are) probably rudimental, in some gramenivorous animals *it is* an organ, second, perhaps, only to the stomach in importance: *see* the great paunch it forms in the horse, and the tortuous cavity with spiral valve in the rabbit."

"The study of the human skeleton," the Doctor further observes, "and the description of each particular bone, has [have] heretofore been carried to a degree of minuteness frequently unnecessary, and sometimes useless." Yet he shews how useful the study of osteology may be made in the investigation of fossil remains. Cuvier is noticed, in reference to this subject, with a most eloquent brevity. "He commenced *life*," says Dr. Jacob, "as tutor to a country gentleman," (we never heard this extraordinary fact before); he died too soon for science, encompassed with *literary* glory, and his monument is the *ossemens fossiles!*" Let M. Pariset, with his Eloge, hide his diminished head after this.

The utility of chemistry is next alluded to as an essential "*preliminary foundation*" for the study of geology; and the Doctor asks, "should not the medical student, therefore, rejoice that those studies which are essential to his professional education smooths (smooth) the way to *the proud distinctions of the scientific world?*"

Botany is next noticed, and it leads to another question. "A new country for his excursions is opened to him, new objects to stimulate his curiosity and rouse his spirit of inquiry are presented to him, and shall he pass by the *one*, or disregard the *other?*" In which we are left in the usual perplexity, which is the *one*, and which the *other*.

The Doctor now draws to a conclusion, after having, as he says, exhausted his "storehouse of arguments;" and certainly the conclusion is not the least remarkable portion of this curious performance. "*Many of you*," says Dr. Jacob to his auditors, "*do not credit one word I have uttered; but when the schoolboys of* 1840 BAA (!) *at your ignorance, you'll recollect what I have said!*" And the following is the elegant parting compliment which the lecturer pays the profession, and more particularly the heads of his own College, in his concluding appeal:—

"*Young gentlemen, these are signs of the times;* they are worthy of careful consideration and reflection. If you choose surgery as a means of livelihood, undertake the study of it as a profession, and bring to it the feelings, habits, and ambition which distinguishes (distinguish) the members of other learned professions. If you would undertake it as a trade, I beseech *of* you to desist; you can easily find an *honester*, more *respectable*, and more lucrative calling," —viz. than surgery.

In another part of the lecture he calls, as we have seen, the seniors of the surgical profession in Ireland (allegorically, of course), "foxes without tails." In a letter published some time since in a worthy contemporary of ours, Dr. Jacob called the same persons "a parcel of unprincipled scoundrels:" and now we find him telling them to their faces, that it is easy to find an honester and more respectable calling than theirs. It must certainly be confessed that there is no great courtesy in the Doctor's bearing towards his professional brethren.

But we said he concluded with a compliment: we should rather say that he finishes with a blunder. His last sentence is this:—

"To-morrow, I will proceed with the

inquiry respecting the *fossil remains* of the mammalia, *commencing with* MAN."

He might as well, in our humble opinion, commence with what Tristram Shandy ends in,—"a cock and a bull;" for either of these animals may possibly have its fossil representative, but every tyro knows that *there is no fossil man.* We wish we had some account of the second lecture, just to see what the professor of fossils made of the subject of a petrified *homo.*

But enough of this: we have now been amused sufficiently, and we are obliged to Dr. Jacob for the pastime he has afforded us. We must not, however, part from the Doctor without telling him "a bit of our mind;" and that as bluntly as he could himself wish on a similar occasion. If the lecture we have noticed had been published in some of the low Dublin prints, where the Doctor's lucubrations have from time to time appeared, we should have attributed much of its bungling and vulgarity to the ignorance of reporters: but appearing as it does, officially, with the name of the "Professor" attached to it, and published by the bookseller of the Irish College of Surgeons, the case is altered. We need stand on no ceremony, for the publication, we presume, is genuine; and from the deliberate judgment we have been enabled to form of it, we can only say, that a worse introductory lecture in a printed form has never fallen into our hands. It is full of bad reasoning, bad composition, bad grammar, and even bad spelling: and we confess it is the fact of its peculiar badness in so many ways, that has so strongly recommended it to our critical notice.

*** *We have again been compelled to give an* ADDITIONAL *half Sheet, for which, however,* NO CHARGE *is made to the reader.*

MEDICAL GAZETTE.

Saturday, November 23, 1833.

MEDICAL REFORM IN FRANCE.

THE proceedings of the French Academy of Medicine are at the present moment full of interest for the profession, not only in France, but throughout Europe. A reform has for some time been loudly called for among our Gallic brethren. The state of medical education, and of the profession generally throughout France, has been felt to be so out of joint, so overwhelmed with abuses, that the government have taken the matter up, and are determined on a complete reorganization. The method adopted by the Minister has been to propose a series of questions to the Academy, on which they have appointed a Commission; and the project that they propose to adopt has already occupied several sittings in the perusal. What order or orders of practitioners ought to be recognized? is the substance of the first question of M. Guizot; and it involves the consideration of whether the humble class of *Officiers de Santé* should be any longer legally countenanced. The reply of the Academy is unfavourable to the continuance of this class; and it is recommended that there shall be throughout the country but one order of practitioners—namely, those who shall be qualified Doctors of Medicine or Surgery. Another recommendation of the Academy is—one, indeed, which is unavoidable if the *Officiers de Santé* be suppressed—to institute three new Faculties in France, namely, in addition to those of Paris, Strasburg, and Montpelier, to establish similar bodies, with equal powers, at Bordeaux, Lyons, and Toulouse.

The adoption of this part of the project, it is expected, will give rise to much murmuring on the part of existing monopolists; but if the plan proposed in an influential quarter be acceded to—namely, that of vesting the power of licensing practitioners, and of conferring degrees, in a board or boards perfectly distinct from the recognized teachers in the several Faculties, it is conceived that

much matter for jealousy will be removed. With respect to professorships, there is a proposal which seems very reasonable, and very necessary, in consequence of the frequent and vexatious changes which have from time to time been made in the chairs, owing to political motives; and that is, that their possession shall be permanent, and not subject to ministerial caprice.

There are two other points of great importance contained in the project:— 1. The establishment of a regular order of practitioners throughout the departments, to be entitled *Médecins Cantonnaux*, and, in fact, to be put on the same footing as the clergy throughout France. It is supposed that the population will require not less than 15,000 of those *curés* of the body; but the general impression is, that that number will fall short of what is required, particularly if the *Officiers de Santé* be abolished. 2. The institution of certain local tribunals, chambers of discipline, or, as they seem more likely to be called, *Conseils médicaux*, which shall take cognizance of all matters directly pertaining to the interests of the profession, and provide for the due administration of the laws relating to medicine. This is an arrangement that will require great care in its adoption, and much consideration of the extent to which it shall be carried; for in reality, as at present it is to be understood, it must comprehend every thing relating to the medical *morale* of the country.

Secret remedies—a subject seriously submitted to the notice of the Academy, in a special question—are treated by that learned body at much greater length than they deserve. Instead of scouting them at once in the most peremptory manner, the committee enter upon various considerations touching the proper method of disposing of the claims of charlatans.

Among other topics noticed in the project, the question of the propriety of allowing the practice of pharmacy to be combined with that of medicine and surgery, is introduced, and disposed of in the negative. The irresponsibility of medical practitioners in the fair exercise of their profession, and the privilege of silence regarding confidential communications, are two other points which are strongly contended for by the committee of the Academy.

Such are the principal matters embraced in the project of French reform, but we shall be obliged to recur to the subject. The reading of the report, we believe, has not yet terminated, and much discussion is expected when it does. There can be little doubt of the liberality and sound views with which the business of reform is taken up by the Academy; but there being other and rival bodies to be consulted before any definitive arrangement can take place, it is extremely uncertain what the issue of the inquiry will be. It appears that the government have not confined their queries to the members of the Academy only; the Faculty has been also consulted, and that learned body is engaged on a work to be separately submitted to the Minister. Nor is this all; the Medical Association, consisting of the great mass of the practitioners of Paris, have also undertaken to form *their* project of reform. We can only say, that we heartily wish the profession in France a good deliverance. We shall certainly not be inattentive observers of the progress they make; for we look upon the occurrence of those transactions among our neighbours to be as opportune as they may prove profitable, by the immediate example which they afford.

An Erratum.—In our leader last week, in speaking of the College of Physicians, we meant to have said—"We suspect it is too late to talk of appointing a committee to revise the by-laws; a better plan would probably be to repeal them altogether, or failing this, to send their charter to the government," &c.; but the words "failing this" were accidentally transposed, and our meaning thus rendered obscure.

RECIPROCAL *PARTIALITIES.*

Rather a vehement letter will be found at page 292 of our present number, on the subject of an address recently volunteered by Dr. Grant, of the Gower-street School, to his pupils, in commendation of the moral and scientific qualifications of Mr. Wakley. So far, however, from taking up the matter as our correspondent has done, we really think the learned Professor is entitled to infinite credit for his candour. Candid it unquestionably is in any man openly to avow that he concurs in the Lancet code of morality, and regards the most respectable part of our profession, including the Dean of his own Faculty, and several of his present and former colleagues, as delinquents who have justly suffered beneath the lash of that virtuous " castigator of evil-doers," as well as in modestly intimating to what class he himself belongs, when he speaks of the kind attention shewn to him by " the rewarder of the good." Our correspondent is at a loss to account for this display, but to us it seems the simplest thing in the world; Wakley finding that sundry schemes, in the shape of Courses on Veterinary Medicine, Galleries of Portraits, Summaries of Foreign Works, &c. &c. had all successively broken down, resolved to try what Dr. Grant's lectures would do for him; and in order to give the speculation a fair chance, had them advertised in Mr. George Robins's very best style. Now the worthy Professor, who is quite innocent on such matters, takes all this literally, and sucking in the praise, like one of his own sponges, attributes it to partiality to himself; and thus, while certain of his colleagues only venture on a little quiet flirtation *sub rosa*, and which they are most anxious to conceal, he makes his declaration openly, and in the fulness of his heart betrays the secret of a mutual attachment between Mr. Wakley and the Gower-street establishment.

That the worthy Editor, to whom any open declaration of this nature must come with all the freshness of novelty, should feel Dr. Grant's reciprocal kindness very deeply, is of course to be expected; and as he can scarcely do more in the way of puffing him at present, we venture to suggest, as a mark of his gratitude (which would be looked upon as a delicate and very pretty compliment), that he should present the learned Professor with an honorary diploma of the Collegium Wakleyanum: or he might even let him have a batch of them at half price, for the benefit of his friends; which Dr. Grant would certainly mention to his class as " another instance of kind attention—he would almost say of partiality—towards the great medical school."

CLINICAL LECTURE

Delivered at the Middlesex Hospital, Nov. 9, 1833,

By Sir Charles Bell.

Gentlemen,—I am happy to meet you here again: I have been so long in the habit of conversing with the pupils on the occurrences of the hospital, that, omitting it, I feel as if something of the day's duties were neglected.

I have here a very short note, handed to me by the house surgeon, but it refers to cases which you yourselves have taken a warm interest in. I am not going to deliver a formal lecture; such, indeed, is not the purpose of our meeting. I shall be of infinitely more service to you by endeavouring to supply you with additional motives for attending to the practice of the hospital, and scrutinizing all you see. Accordingly, I take up the subject of amputation, not for the purpose of entering fully into it, but that I may entreat you not to neglect those cases which suggest to you the great questions of practice. Let us see how far we can profit by those which we have recently witnessed. I beg your attention, in the first place, to the two

Cases of Compound Fracture of the Leg.

Here a man is brought in with the bones of his leg shattered, the integuments torn up from the ankle to the knee; and at once you perceive that this is a case in which the

limb cannot be saved. A consultation, however, is held, and it is determined to operate. The operation is performed; and I think about the 70th hour those symptoms which are the precursors of the patient's death, come on. What is the cause of death? Is there any thing peculiar in the original accident? or are we to put the circumstance of the original accident out of our consideration? Is it to be attributed to the operation of amputation? What is there in the operation performed in these circumstances different from the twenty operations of amputation for exhausting diseases, in which you may have seen, that on the very night of its being performed, the patient sleeps quietly and comfortably, and no untoward symptoms arise up to the ninth day?—What is the difference?

The next case is one of compound fracture of the tibia and fibula—the bone sticking out, close to the ankle joint, presenting that appearance which is produced when the bone is fractured by a man falling from a height perpendicularly upon the sole of his foot. A consultation is held, and it is thought proper to attempt saving the leg. Here the bone protrudes through the integuments; the integuments are inverted, and are tight round the end of the bone; the portion of bone is like a button in a loop, and we are under the necessity of dividing the edge of the skin to release it. After all, the bone cannot be reduced: the house surgeon tries, the assistant surgeon tries, the surgeon of the week attempts it, and he finds it necessary to employ his saw, to take off a portion of the bone, and so reduce it. Now I beg you to mark this, which is a case that will occur to you over and over again in practice. When you first come to the patient, the projecting bone, the torn integuments, the twisted foot, indicate the danger of the patient; but when, again, every thing is put in its place—the foot is in its just position, the integuments found to be really, after all, not much torn:—looking to it then, you would say, "Of course this is not a case for amputation." Well, an attempt is made to save the limb. Observe what happens;—mark what danger the patient incurs in this attempt. We shall say nothing here of convulsions or tetanus; we shall say nothing of the extensive suppuration that must in the most favourable circumstances take place. But you have seen what actually happens: first shivering, then fever, then a blush of redness on the wound, then an erysipelatous inflammation extending up the limb and along the outside of the thigh: now the patient's tongue is dry, the powers of life run low, and you lose him.

Compound Dislocation of the Ankle.

The third case is a compound dislocation of the ankle. Here is an older man than the others. It is at the christening of a child that he gets a little tipsy; coming down stairs he falls, and he is brought into the hospital, with three inches of the bone sticking out, on the inside of the ankle; the fibula is consequently broken, for you know that the tibia cannot come off the astragalus without the fibula receiving the weight of the body; the apparatus of the joint is broken up; the ligaments and tendons are strained or torn. Looking to the condition of the patient, and to the condition of the wound, taking into account all the circumstances, it is resolved, in consultation, that he shall suffer amputation. Now, gentlemen, you have just visited the patient with me, and your sympathies are here enlisted in the question. Lectures are good; but how poorly they claim attention, compared to the interest you must now feel to belong to this vital question. You find that on the third day, almost on the same hour in which the same symptoms came on in the former case, there is vomiting of green matter, that his pulse is rapid, his tongue dry, and he is in indescribable anxiety. He is treated properly with calomel and opiates, a stimulating cataplasm applied to the stomach, &c., and he gets over the severity of the attack; but still he is in the most precarious condition. If he survive, which is very doubtful, it will not be owing to better treatment than in the other cases: there is only this difference, that the operation has been done on the leg instead of the thigh; and the operation being performed below the knee, instead of above it, there is less of that sort of undefinable injury which takes place from the lopping off a limb from the body!

These are the sort of cases that you are to attend to, and which will be of use to you at a further advanced period of life. I can conceive you ten, fifteen, nay, twenty years older, rich perhaps, and prosperous, and with a great deal of practice; and still you will be calling these cases to your recollection, for the questions arising out of them will occur again and again. You will then, perhaps, be heard to say—I recollect about the year 1833, yes, it must have been that year, for I was then a student, and it must have been early in the season, for it was amongst the first cases that I observed, and it was under Sir Charles Bell, who, with all his failings, was particularly anxious about his patients,—in one case the limb was taken off, and the patient died; in another an attempt was made to save the limb, and this patient died; a third suffered amputation,

and precisely the same symptoms came on, and he also died.

It will happen, gentlemen, that in all your after years you will find your conceptions taking a shape by the impressions you are now receiving; and therefore I am anxious that they should be correct as well as powerful. I hope that these three cases will make a due impression on your minds, and that you will be prepared for the further consideration of other circumstances which belong to this subject, as the opportunities may occur during the season. I am afraid, with whatever assiduity you attend to the facts, with whatever ingenuity you may enter upon a train of reasoning concerning them, you will feel, as I do now, and as every conscientious man must, that the question as to the propriety of amputation is always one of great difficulty and anxiety. From these cases you learn the danger of the attempt to save the limb, and also the danger of immediate amputation. There is a question which we may afterwards agitate, the proper *time* for amputation; but you see that when the operation is performed on the afternoon of the day of the accident, there is still extreme danger—that is, if a man in a condition of health, or who, but for such an accident, would have continued well, suffers amputation, these formidable symptoms come on at a certain period, which are followed by death. The only conclusion that we can at present draw from this is, that we may, in some cases, remove the limb, and yet avoid much of the shock of the formal operation of amputation. To cut across the limb, either above or below the knee—that is, in the fleshy parts of the limb—is not only lopping off, as it were, a greater part of the *whole*, but it is to cut through a much larger portion of integument, muscle, and nerve, than if you separate the remaining part at the open wound near the ankle, and smooth the bone. Remember, this is a question; it is not the rule of surgery; it is merely suggested to me by the repetition of such occurrences as you have witnessed. I may mention here, as connected with this subject, what I have done in mortification of the foot and leg. The patient's constitution and powers of life not being in a condition for him to suffer amputation, I have in a manner favoured the separation which nature had begun, instead of performing the regular operation above the knee, by detaching the parts by little and little, applying antiseptic poultices, and finally sawing through the bone; and thus, by avoiding the shock of amputation, have saved the patient. There is a resemblance in the circumstances, although the parallel be not complete.

Amputation at the Shoulder-Joint.

The next case on which I shall offer a few remarks I must beg you to notice, for a different reason,—I mean its rarity. You will, probably, in the course of your life, if we continue to enjoy peace, at least, have very little opportunity of seeing or performing the operation of amputation at the shoulder-joint. The patient is 47 years of age: he received a blow on the arm, a little above the insertion of the deltoid muscle, from the blunt edge of a piece of iron. It appears from the slight note I have handed to me that "he was treated for dislocation." You know, I suppose, how much that expression means. If a man is supposed to have his shoulder dislocated, what pulling, and fingering, and bandaging, does he not undergo?—what injury is, consequently, inflicted, in addition to the accident? Well; but it appears that "he recovers all this." Not so; he does not recover; on the contrary, this is his condition:—There is a great swelling, just occupying the space which you describe anatomically as embracing the deltoid muscle: it is a large elastic swelling, with the feeling of undulation from fluid contained within it.

A consultation is called, and I am to tell you what passes through the minds of the surgeons. What is this swelling? *It may be an abscess;* for it immediately occurs to the consultants, that in a strumous or scrofulous constitution, when there is a blow, or strain, or injury of any kind, there follows a scrofulous action or inflammation, and by and by an abscess; and the symptoms are obscure. That is to say, there are some constitutions so prone to the chronic strumous action, that abscess forms where there is slight injury, and there are no inflammatory symptoms. I remember a case of this kind; and I confess I was a good deal puzzled about it. The patient returned, and I recommended, or rather enforced the recommendation which she had received, to have the swelling shampooed. The result was, that she came back saying that she was amazingly relieved: the fingering, the pushing, the kneading, during the process of shampooing, had given greater liberty to the matter, and the pus originally formed below the deltoid, made its way from under that muscle, and the full motion of the arm was restored. Still there was something obscure about the case: at last, inflammation of the integuments took place, the abscess pointed, the matter burst out, and it was obviously a strumous abscess. I need not add, that this was early in my practice. But with respect to the present case, the next thing which suggested itself to our

minds was, the possibility of the tumor being a *disease of the great bursa*. You will remember, that between the head of the humerus and the projection of the acromion scapulæ there is a large bursa, and that bursa is sometimes the seat of inflammation and suppuration; or it may contain a collection of fluid resembling its proper secretion. I remember the case of a man on whose shoulder a great beam of wood fell, and just such an appearance was presented in him that we have seen in this patient; but in the former, it proved to be a collection of matter formed in the bursa by chronic or strumous inflammation, excited by the injury; and it was cured by a seton. The most serious question which suggested itself in the present case was, whether the complaint was of the order of those diseases which are described as *fungoid*. To ascertain this, the tumor was punctured; but no brain-like or fungoid matter escaped. However, on the whole, it appeared most probable that there had been fracture, and consequent disease of the bone, with abscess around the joint. This, at least, was my idea; for on moving the arm, it appeared that the bone did not revolve upon the articulating extremity, but on a point a little removed from the extremity, which implied that the humerus itself was implicated, and that it was either broken or softened. It was thought, if there be suppuration, it is probably in the centre of the bone and around the joint, and there is no hope from treating the disease by evacuation of the matter; because there must be a carious bone in the centre of the abscess. Again, to take out the head of the bone, in the manner in which I have recommended it to be done for some cases of gun-shot wound, would be to leave too much surrounding disease. Amputation was, therefore, determined upon—amputation at the shoulder-joint.

Now a few words on this operation. In amputating at the shoulder-joint, you take advantage of the fleshy mass of the deltoid muscle, and out of it form the flap. Grasping the integuments and muscle, you so use your long amputating knife as to divide the deltoid near to its insertion, and raise it up bodily by one sweep, so as to leave it at its attachment above—that is, at the whole extent of its origins. You may do it in such a case as this, by managing the knife so that you go close to the walls of the abscess, or to the diseased part; and thus, by an easy dissection, raise up the deltoid, and preserve it to fall down on the face of the wound. But considering the operation as adapted to other cases, you must recollect that, in amputating, you have to save the skin to cover the muscles, and to save the muscles to cover the bone; and you must modify this acknowledged rule to the particular case. In amputating at the shoulder-joint, you may have to cut and carve in different ways, according to the nature of the disease, or the character of the wound. It is not always that you can thus raise the deltoid; but you must find a portion of integument on one side or the other, to make your flap fall neatly in front of the wound. However, in general, the flap should be formed of the deltoid muscle.

The next subject of consideration is the compression of the artery. The patient being placed in a chair, the assistant stands behind him, and with his thumb pressing behind the clavicle compresses the subclavian artery. By all means adopt this precaution, but do not trust to it for arresting the hæmorrhage; for if you do, you will in some cases be most grievously mistaken. I have seen the operation often performed, and have performed it myself; and I have seen the following occurrence, which I beg you to notice, and to take the proper means to guard against. While the patient sits stoutly and resolutely to suffer the operation, the pressure behind the clavicle is sufficient to stop the pulse; but from the loss of blood he presently sinks down, and then the artery gives out its blood in a torrent. If the patient be not properly supported, and he thus sinks down, the pressure amounts to nothing; you must take care, therefore, to hold him up, so as to maintain him against the pressure. The circumstances are not a whit better when the patient lies horizontally; the slightest jerk or elevation of the shoulder, so natural to a man suffering such severe pain, raises the assistant's thumb, or compress, from the artery. But I am bound to state to you my opinion distinctly, that the pressure above the clavicle is not to be depended on as an effectual means of stopping the bleeding. I have seen the compression attempted, not by a young man, but by an elderly, experienced, and powerful surgeon, and when the artery was cut there was a full gush of blood from it. It is one thing to compress the artery so far that it stops the pulse; it is quite another thing so to compress it that the blood shall not pass along it. I said to Mr. Arnott, who was the operator, we need have no anxiety about this bleeding; for I will be bold to say, that there shall not a drop of blood more be lost here than in a common amputation, if so much. Accordingly, I undertook the office of stopping the hæmorrhage. The manner of doing it is simply by grasping the integuments round the shoulder during the formation of the flap. By thus grasping the whole, you stop the collateral vessels; but observe, that by this you do

not stop the principal artery. As soon as the flap is raised, the capsule of the joint opened, and the head of the bone pulled down a little, the thumb is to be put into the capsule, between the head of the humerus and the glenoid cavity; and having the four fingers of the same hand in the axilla, the axillary artery can be grasped along with the integuments, and made perfectly secure, whilst the operator completes the incision on the lower part. During all this time the assistant-surgeon compressed the artery above the clavicle; but the operator requesting to see the artery more distinctly, I relaxed my grasp, and let a jet of blood escape, which sufficiently proved that the pressure above the clavicle in these circumstances was of no value. It is said that this holding of the artery between the fingers is of little consequence; but I consider it to be of the utmost consequence. If it be said, "When the artery is throwing out its blood I put my fist against it," I ask what is to be done next? When do you take away your fist? Because, when you do remove it from the face of the wound, you will have a full stream of blood. I hope, gentlemen, that you have not yet to learn, that the nearer to the heart the loss of blood takes place, the greater is the effect upon the constitutional powers. A person will lose pounds of blood without experiencing any bad effects, if it come away slowly by the extreme vessels; whereas a few jets of blood direct from the trunk near the heart, will cause him to faint in an instant; and therefore I say that it is of the greatest possible consequence that the main artery be secured in this operation. It may not be of the same importance to a man in perfect health and strength; but I very well recollect seeing a case where a ball had passed through the head of the humerus, and then struck on the ribs, forcing them on the lungs. You can imagine how much the man was reduced, what a miserable object he was, and by what a slight tenure he held life. Now in that case, had the patient lost only a little blood he might have survived; he would not have sunk, as he did, from the effect of the operation; there were one or two full jets from the vessel before it could be caught or tied; and in my opinion it was in consequence of this that his strength failed, and that he sunk almost immediately. In short, it will not do to pooh! pooh! the matter down, and say it is of no consequence; for a few ounces of blood is of the utmost importance in these circumstances. At the same time that the artery throws its blood out, it retracts amongst the loose cellular texture of the axilla, and you cannot see its mouth. You must recollect that the artery, being here surrounded by nerves, it will not do to plunge the tenaculum deep into the chasm from which the blood flows; the artery must be picked out and tied neatly; and to accomplish this, it is positively necessary that the assistant shall have the command of the vessel.

Well, this operation, I need not say, was performed with considerable anxiety in all our minds; and that is a great merit; for I cannot find words to express my detestation of what is called "bold surgery." It was done with care and with neatness; and I have only to observe, that it has been completely effectual. The man has suffered very little, and is now doing well, the disease having proved to be an injury from a blow, followed by destruction of the bone, with suppuration within the capsule of the joint and around it.

[The Lecturer proceeded to make some observations on aneurism and the ligature of arteries; but as he was interrupted, and afterwards resumed the subject, we shall give the lecture entire in our next number, rather than divide the subject.]

ABSTRACT

OF A

CLINICAL LECTURE,

DELIVERED BY

JOHN BURNE, M.D.

Physician to the Public Dispensary, Lecturer on the Practice of Medicine at the Medical School, Aldersgate-street, &c.

Fibrous Tumors of the Uterus, Ascites, Peritonitis, and first stage of absorption of the Kidney.

GENTLEMEN,—The corpse which is here before you is that of one of our Dispensary patients, which the husband has with great good sense permitted to be removed to this theatre* for the purpose of examination, as well as to afford me the opportunity of demonstrating to you the morbid parts. This permission on the part of the husband may be hailed as one of the good effects of the Anatomy Bill, and as an earnest that the Bill, which has hitherto worked well,

* The body was taken to the Medical School, Aldersgate-street, for two days, after which it was returned to the husband's residence for interment. Morbid dissections at the houses of the deceased are of necessity performed with too much haste to be very instructive; and at hospitals the custom of not opening the body till the pupils are assembled, and the expedition with which the dissection is then obliged to be gone through, permits only the exhibition of morbid changes in the gross. If, previous to the exhibition of the diseased parts, an hour or two were bestowed on the dissection of them, and the various lesions traced and accurately made out, pathological demonstrations would be infinitely more profitable and satisfactory.

will by and by furnish abundant materials for the dissecting-room.

The patient, a female, was about 50 years of age, and had been under my care for twelve or eighteen months past. When she first presented herself at the dispensary, there was an evident enlargement of the abdomen, which, by examination, was found to arise from the presence of a fluid, and of a hard and rather large tumor in the hypogastric region: her general health was impaired, and the body beginning to emaciate. Medicine had little effect upon her complaints; the fluid accumulated, distended the abdomen to a great degree, and, by its pressure upon the viscera and diaphragm, gave rise to so much inconvenience as to render paracentesis unavoidable. The operation was performed in the linea alba, and a quantity of fluid of a brownish colour evacuated. By this she was much relieved, and recovered from the operation without any untoward symptom.

The dropsy returned as is usual, and, the abdomen having again become greatly distended, paracentesis was resorted to a second time. But the operation in this instance was succeeded by peritonitis, which, with vomiting and obstinate constipation, persisted during five or six weeks, when she sunk emaciated to the last degree.

Sectio cadaveris.—In the dissection of the morbid parts which were already prepared for demonstration, I was kindly assisted by my colleague, Mr. Skey.

The parietes of the abdomen being turned back, you see a large *tumor* arising out of the pelvis, and occupying the hypogastric region. The figure of the tumor is pyriform, and unequally rounded or lobulated; its superior, posterior, and lateral surfaces are covered with healthy shining peritoneum, and are free; while the anterior is firmly adherent to the pubes and recti muscles, the peritoneal covering of the tumor passing from its superior surface direct on to the abdominal parieties, instead of dipping into the pelvis to be reflected over the posterior surface of the bladder. On the sides of the tumor are to be seen the ovaries and fallopian tubes, bearing the same relative situation to the tumor as they do to the uterus about the fifth or sixth month of pregnancy; thus shewing that the womb is involved in the disease. At this stage of the dissection, neither Mr. Skey nor I could discover any trace of the bladder until the anterior surface of the tumor was detached from its connexions, when the bladder was discovered enclosed behind the pubes, its posterior part having been deprived of its peritoneal covering by the gradual ascent and enlargement of the diseased uterus. Before I detach the tumor from the pelvis, I wish to direct your attention to the immense plexus of blood vessels on either side of the neck of the tumor, which shew the vast supply of blood received by the womb from the spermatic and hypogastric arteries, and serve to account for the rapid and exuberant growth of several forms of uterine disease.

Now that the tumor is detached, its pyriform shape is more apparent, the size of its inferior part or neck being sufficient to fill up the cavity of the pelvis. By dissection, the whole of this mass of disease is seen to consist of round or flattened tumors, of various size from an orange to a horse chesnut, growing in the proper tissue of the uterus between its external serous and internal mucous membrane, and connected by dense cellular substance; so that these tumors can be dissected out or peeled off, as you observe, without injuring the proper tissue of the womb. By the growth of these tumors, the dimensions of the uterus are enlarged, as you perceive, though its substance is not altered from its healthy state.

The *tumors* themselves are hard, and their cut surface exhibits a dull white or yellowish coarse fibrous structure; they are organized, have no disposition to ulcerate or to soften, are free from any malignant character or tendency, and are the product of a lesion of nutrition. The manner, therefore, in which they affect the health of the patient is by the irritation which their growth and size occasions in the uterus and contiguous viscera. These masses were called by Baillie *hard white tubercles*, but as according to modern pathology the term tubercle is restricted to adventitious productions which are not organizable, they are now designated *fibrous tumors*.

The relation which these tumors bear to the tissue of the uterus is characteristic of the difference between innocuous and malignant morbid growths. The tissue of the uterus is here seen to remain distinct, unchanged, and to be merely pressed aside and distended by these various masses; while malignant tumors destroy the organization of the tissue in which they are developed, and involve in their peculiar disease every neighbouring structure and organ.

The next point of interest in this dissection is the effect of the peritonitis, as marked by this general increased vascularity of the membrane, by this effusion of fibrine and albumen, and by these numerous adhesions. This effusion, the product of the inflammation, extends over the small intestines, the colon, the folds and root of the mesentery and mesocolon, the anterior and posterior surfaces of the stomach, the surfaces of the liver, diaphragm, and anterior parieties of the abdomen, but not

over the tumor, nor into the pelvis. Inflammation, when it spreads over the continuous surface of a membrane, as in this case, is said to do so by the *sympathy of continuity*: a finer example of which cannot be shewn to you. These numerous adhesions which have taken place between the convolutions of the intestines, between the colon and the liver, between the liver and the diaphragm, &c., are so many examples of the effused fibrine having become organized cellular tissue, which, as it is exceedingly tender and easily torn through, is of recent formation, and no doubt the consequence of inflammation from the wound of the peritoneum in the last operation.

The frequent recurrence of peritonitis after tapping induces me to recommend you to defer the operation, in all cases of abdominal dropsy, as long as the state of the patient will permit: by tapping, you can only remove the effect of the disease, and relieve the patient from the weight and distention caused by the fluid. The disease, the cause of the dropsy, is not influenced by the operation; and the fluid collects again more rapidly than in the first instance. Almost all the patients affected with abdominal dropsy, whose death I have witnessed, have fallen victims to the operation at some period or other: they may have been tapped twice or twenty times, but sooner or later the operation has excited a fatal inflammation of the peritoneum, as it did in the instance before you. Delay the operation, therefore, until the sufferings of the patient leave you no alternative but to have recourse to it. I have thought that the peritonitis has been excited on some occasions by the pressing the abdomen here and there by the hand, from an unnecessary anxiety to drain off the whole of the fluid; this pressure having caused the extremity of the canula to irritate and injure the intestinal peritoneum, and so to excite inflammation.

The last organic change worthy of your attention is the *partial absorption of the left kidney*, which has arisen from the pressure of the tumor upon the corresponding ureter. The tumor pressing upon the left ureter in its course along the pelvis to the bladder, and obstructing the passage of the urine from the kidney, has produced what I now shew you—*dilatation of the ureter through its whole length, and dilatation of the pelvis and of the calyces of the kidney*; and the pressure of the urine retained in these channels has so acted upon the kidney itself, as to *flatten the mammillary processes*, and cause absorption of its substance to a considerable degree. Had this pressure continued for some months longer, the kidney would have been almost entirely absorbed, the calyces and pelvis immensely distended, and that pathological condition, the *sacculated kidney*, formed.

Having now, gentlemen, demonstrated to you these various organic changes, what conclusion are we to arrive at as to the cause of the dropsy, which proves to be not ovarian or encysted, but of the peritoneal cavity, constituting ascites? There is no reason to attribute it to the fibrous tumors of the uterus: one cannot see in what manner they could induce such a preternatural effusion into the abdominal cavity. Nor can it be attributed to the peritonitis, that inflammation having supervened on the second operation; and as the substance of the liver is sound, the only apparent cause to which the dropsy can be ascribed is the obstruction to the passage of the urine from the left kidney, and the partial absorption of this excretory gland. This may possibly have determined the preternatural effusion into the peritoneum; but as this state of the kidney frequently exists without dropsy, I should hesitate to regard it as the decided cause in the present instance.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Nov.* 19, 1833.

Age and Debility	26	Gout	2
Apoplexy	10	Hæmorrhage	2
Asthma	11	Heart, diseased	3
Cancer	3	Hooping-Cough	10
Childbirth	2	Inflammation	15
Cholera	1	Bowels & Stomach	12
Consumption	54	Brain	5
Constipation of the Bowels	1	Lungs and Pleura	18
Convulsions	36	Jaundice	2
Croup	2	Measles	4
Dentition or Teething	6	Mortification	5
Diarrhœa	1	Paralysis	3
Dropsy	16	Small-Pox	8
Dropsy on the Brain	13	Sore Throat and Quinsey	1
Dropsy on the Chest	3	Thrush	2
Epilepsy	1	Tumor	3
Fever	3	Unknown Causes	41
Fever, Scarlet	10		
Fever, Typhus	3	Stillborn	10

Increase of Burials, as compared with the preceding week . . . 66

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Nov. 1833.	THERMOMETER.		BAROMETER.	
Thursday . 14	from 25	to 40	30·11	to 30·09
Friday . . 15	29	42	30·02	29·90
Saturday . 16	31	49	29·82	29·89
Sunday . . 17	40	51	30·03	30·11
Monday . . 18	42	54	30·14	30·21
Tuesday . . 19	45	55	30·18	30·12
Wednesday 20	34	51	30·04	30·00

Prevailing wind, S. W.
Except the 14th, cloudy.

CHARLES HENRY ADAMS.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 30, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture VIII.

PATHOLOGY of MENSTRUATION.

The irregularities of the menstrual function, gentlemen, will next occupy our attention; and we shall first speak of

AMENORRHŒA.

General Character.— *Amenorrhœa*, or *emansio mensium*, consists in an obstruction or suppression of the menstrual discharge; and it may be considered sometimes idiopathic, or dependent on uterine derangement; at others, symptomatic of disease existing in some other viscus; or of general constitutional debility.

Divisions. — It has been divided, by Cullen, into three species: the first, *A. emansionis;* the second, *A. suppressionis*; the third, *A. difficilis.* The two first species we shall preserve as noted by that great physician; but the last we shall describe as a distinct disease—*dysmenorrhœa.*

AMENORRHŒA EMANSIONIS.

Character. — *Amenorrhœa emansionis* is characterized by the discharge never having shewn itself, although the female has arrived at the usual age of puberty; the menses, indeed, being later in their flow than common.

Causes of the non-appearance of the menses.— Whenever a young woman has reached that period of life at which the menstrual discharge ought to be secreted, without the expected change in her constitution taking place, her female friends become anxious for her welfare; and medical advice is frequently sought, even although she be in tolerable health. But the delay in the formation of this evacuation may depend on other causes besides amenorrhœa. It has been already laid down as a principle, that the time of puberty is not the same in all girls; that climate much influences the early or late eruption of the catamenia; and that the inhabitants of the same countries, and even the members of the same families—individuals leading the same kind of life, and exposed to the same exciting causes—still vary exceedingly in this particular. Mr. Roberton, whom I have before had occasion to mention, has placed this fact in a very striking light: he has given us the ages at which 450 women in this kingdom began to menstruate, deduced from his own investigation; and he places every reliance on the statements he obtained. The following is the result of his observations:—

10	commenced in their	eleventh year.
19	- - -	twelfth
53	- - -	thirteenth
85	- - -	fourteenth
97	- - -	fifteenth
76	- - -	sixteenth
57	- - -	seventeenth
26	- - -	eighteenth
23	- - -	nineteenth
4	- - -	twentieth.

It is thus evident that the mere attainment of a certain age does not necessarily infer the establishment of puberty; and the irregularity may be attributed to that epoch not having yet arrived. If, therefore, we be consulted in the case of a girl who, although perhaps sixteen or seventeen years old, has still the voice and appearance of a child—if her form be not developed—if she be harassed with the fears, and delighted with the toys, of childhood—we can be at no loss to recognize it as one of protracted puberty, and we may calm apprehension and allay much uneasi-

ness by candidly pointing out the circumstances of the case, with an assurance that most probably in due time all will be correct. On the contrary, however, should the patient have the mellow voice of womanhood —if she possess in person the plumpness, and roundness, and fulness of puberty— if we observe her eye sparkling with vivacity, or beaming with feeling and intelligence—if her actions be stamped with those beauteous graces, those winning elegances, which this crisis so wonderfully imparts; then we may determine that she has arrived at maturity, and we must seek some cause for the discharge being unnaturally delayed. Its default may depend also on a want of, or congenital imperfection in the uterus and ovaria: such cases are certainly rare, and would be evidenced by the entire absence of all sexual feelings and propensities, as well as of the general indications of puberty.

Again: the non-appearance outwardly of the discharge, does not of necessity indicate that the secretion is not formed; it may be arrested behind adhesions of the parts, or an imperforate hymen. Thus, if our advice be required on behalf of a patient in whom the other symptoms of puberty are fully established—if we should learn that she has never been the subject of menstruation, or any discharge from the genital organs—if she should also complain of a fulness at the lower part of her person, together with a sense of weight or bearing down, and irritability of the bladder—if it be evident that she is suffering principally from these local inconveniences, we may then probably suspect, and with great propriety, that there is some mechanical impediment to the external flow of the fluid which has been duly secreted. Under these circumstances it would be proper to institute an examination, either with the finger or eye; and should we find that the vagina is blocked up—that there is not the slighest passage into it at any point; particularly if we should detect a membranous septum stretched across it, convex on the external surface, and feel a degree of fluctuation behind the membrane more or less evident; it it then necessary that we should have recourse to an operation, such as will hereafter be more particularly detailed.

True amenorrhœa emansionis consists in the menstrual fluid never having been secreted, although the subject has attained the fulness as well as the age of puberty.

Symptoms.—The symptoms of the disease are of this kind. There is a great feeling of lassitude and debility; a general loss of health, with a sallow or peculiar greenish cast of countenance, to which the term *chlorotic* has been applied; a puffiness of the eye-lids; clammy mouth; the tongue more or less loaded, and indented on its edges by the impressions of the teeth; the breath of a faintish and unpleasant odour; sometimes, indeed, possessing a peculiar and characteristic smell, like that of a cow. We observe considerable derangement in the vital and animal functions; a small, quick, and often irregular pulse, with palpitations and dyspnœa. The faculty of digestion is much disturbed and impaired; costiveness and acidity are usually present, attended with a loathing of the common articles of nourishment and a craving after indigestible substances. This morbid craving has sometimes been so extreme as to induce the patient to swallow chalk and cinders ravenously. The abdomen swells, from the large quantity of flatus formed in the intestines, particularly the colon; and the legs and feet are generally cold, and occasionally become œdematous. A violent pain in the side is an almost universal symptom; chiefly referred to the short ribs, or some part of the space between their lower margin and the spine of the ilium—sometimes on one side only, at others in both, and occasionally in each by alternations; most frequently putting on an erratic character; not inflammatory, and apparently dependent on loaded bowels. There is a great disinclination to exercise, and even to the least bodily exertion; walking at a brisk pace is scarcely possible; mounting up stairs is only accomplished by considerable effort, and even moving across the room is irksome.

As the complaint advances, more serious indications of derangement in the system manifest themselves—such as emaciation; a dry husky cough, without the presence of any actual disease in the chest; troublesome restlessness, and hysterical affections. It is highly necessary to be mindful of this cough, because the symptoms have been often mistaken for those of phthisis; nor, indeed, is this to be wondered at, as the general appearance of the patient is much assimilated to that of a phthisical girl. It is these chlorotic cases, attended with pain in the side, cough and expectoration, quick pulse, emaciation, and nocturnal perspirations, which are daily affording to empirics the boast of having cured consumption. The complaint may be discriminated from phthisis by the pulmonic affection being consequent on the other symptoms, and not the original cause of distress; by the pulse, though frequent, not being liable to the same regular exacerbations as observed under tubercular disease; by a full inspiration producing no pain, and little inclination to cough; by the patient's being able to lie, with equal ease, on either side or the back; by the cough being generally worse in the morning, not being increased on motion, and being attended with compa-

ratively trifling expectoration. In chlorosis, also, there is usually excessive palpitation of the heart, dyspepsia, and a timid and desponding state of mind; which latter symptom particularly, seldom accompanies genuine pulmonary phthisis. It must be remarked, however, that consumption often follows, and sometimes seems to originate in neglected chlorosis.

Occasionally a whitish discharge occurs from the vagina: this is to be accounted rather a favourable symptom, if not to a weakening extent—especially when it appears only at stated intervals, and is not constant—because I have already mentioned that sometimes, at its first eruption, the menstrual discharge itself is not of a coloured character. But if there be present an uninterrupted leucorrhœal drain, it brings with it augmented weakness and an aggravation of the morbid symptoms.

Treatment.—Our treatment must be such as is likely to improve the general health. Before any other means are adopted, it is absolutely indispensable that the bowels should be perfectly cleared, as there is almost always a loaded state of the intestines. In the first instance we may exhibit two or three doses of calomel, at intervals, each being followed by a brisk purgative draught; and these may afterwards give way to gentler laxatives. A slight course of blue pill, or some other mild preparation of mercury, may be continued for a little time; not to such an extent as to produce salivation, but merely for the purpose of correcting the secretions. After they are brought into an improved state, we may commence with tonic medicines. The necessity of keeping up a brisk action on the bowels for some time is evidenced by the state of the dejections passed; they are always of an unhealthy character; sometimes white, at others gelatinous, but more frequently black and very offensive. Dr. Hamilton, senior, of Edinburgh, indeed, so well known by his work on purgative medicines, relies for the cure of chlorosis entirely on purging; and he recommends that we should not be satisfied with a mere laxative course, but exhibit strong cathartics day after day, so as to procure a number of liquid stools. He adds that, under this treatment, instead of the strength being impaired, as we should suppose must be the case, it is indeed much increased; and the patient not only regains strength, but flesh. This he accounts for from the altered state of the secretions induced under the treatment, and the consequent improvement in the faculty of digestion. I have never myself had recourse to the powerfully purgative plan which Dr. Hamilton so strongly advises; I should much fear that the debility would be increased, the bad symptoms aggravated, and the powers of life eventually undermined.

Whether we follow Dr. Hamilton's system with regard to purgatives, or the milder plan, in the first instance; after a time, at any rate, we shall derive advantage from the exhibition of tonics. Any of the bitters may be given with good effect, such as bark, infusion of columbo, or gentian; but steel will be found most efficacious. This remedy may be exhibited in many forms; the carbonate, the steel wine, the muriated tincture, or the solution of the tartrate, which I before mentioned, in their common doses. But of all the preparations of iron, by far the most powerful in leucophlegmatic chlorosis, especially if attended with leucorrhœa, is the sulphate; it may be given in doses of a grain twice or thrice a day, combined either with extract of gentian, or colocynth, or aloes, or perhaps all. This medicine has been long employed in amenorrhœa and chlorosis; but to Dr. Marshall Hall, whose name carries with it great weight on all subjects connected with female diseases, the profession is mainly indebted for placing its virtues before them in a proper light. The preparation known by the name of Griffith's mixture, which has received a place in our Pharmacopœia, as the mistura ferri comp., was perhaps the most common form in which the sulphate of iron was sought to be exhibited. In this combination, however, a decomposition occurs by the addition of the potass, which deprives the iron of its sulphuric acid, and a black oxide is left instead of the original salt, so that a much less active therapeutic agent is produced. It is much better to give the sulphate plain, or in conjunction with some gentle aperient, if necessary, or bitter extract, made into a pill. I am myself much in the habit of using it in this way, and in many instances I have seen decided benefit accrue from it. Iron seems to invigorate the digestive powers, so that the blood is improved in richness, and the quantity of the red globules increased; and it secondarily excites the heart to more powerful action, the pulse becoming fuller and stronger under its use, and the capillaries being more equably and fully distended. I have really been surprised sometimes at the rapid change for the better which has taken place in the countenance of chlorotic girls, as well as in their general health, during the exhibition of this medicine.

The diet must be simple and nutritious, and such as is easily assimilated; milk, broths, light puddings, eggs, and meat if the stomach will digest it; a small quantity of wine may be allowed, and most of the subacid fruits.

Regular exercise is of the greatest service; walking, riding on horseback, danc-

ing, and skipping, will each in their turn answer a good purpose. Much advantage may be gained by change of air and scene. If the patient live in town, she should be sent into the country; if in the country, she should go to the sea-side, or to some chalybeate spring, as Bath, or Cheltenham. Often we find bathing, either warm or cold, of great efficacy. If there be pain about the loins or uterus, the hip, or whole warm bath, will be the most proper; but if there be no pain, and the patient can bear it, a cold plunge bath, or a dip in the sea, will be found more useful. With regard to cold bathing, I may mention that, in recommending it medicinally, we must be guided principally by the feelings experienced by the patient herself. If when the surface is wiped dry there is a general glow and warmth of the skin—if she is light and active after the bath, so that she feels inclined to walk home—if the appetite is strengthened, and she relishes her next meal, we shall be sure that the bathing at least does no harm, and will most likely be productive of good. It may then be continued both as a luxury and a medicinal auxiliary; brisk friction over the person, by means of a soft flannel or flesh-brush, will probably heighten its effect. But if, on the contrary, after the surface is thoroughly dried, a cold shiver, or tremor, runs through the frame—if the skin is harsh and rough, putting on that peculiar unevenness so characteristically designated *cutis anserina*, and at the same time becomes pale or bluish, with a livid mark below the under eye-lids—if we find that she is languid and unwilling to take exercise—that her appetite is impaired instead of being increased—and especially if drowsiness or headache supervene, we may be sure the bathing is doing injury; and, under such circumstances, it should not be repeated.

Electricity is another very powerful auxiliary; but it must be used cautiously. It is perfectly inadmissible if there be much pain about the uterine region. More advantage will be derived from slight shocks than sparks; and they should be directed as well from hip to hip, as from before backwards. We should naturally expect electricity to prove of most service, if there be any symptoms present such as usually attend on the approach of menstruation. Its efficacy has been frequently observed; and Sir C. Clarke states, that he has known two or three instances of patients actually menstruating while on the insulated stool.

Emenagogue medicines have been much recommended at different times, for the purpose of stimulating the uterus to form its secretion; they consist of aloes, sabine, black hellebore, lytta, madder, assafœtida, myrrh, and other warm gums. It is most probable, however, that none of these remedies exert any specific action on the uterus, but affect that organ through the parts in approximation to it, which they more or less irritate. Thus aloes and black hellebore, it is well known, stimulate the rectum; and lytta the neck of the bladder. As an emenagogue, sabine has held perhaps the highest place. The best mode of exhibiting it is in the tincture, of which one drachm may be given three times a day, in an infusion of cascarilla, columbo, or any other such vehicle. The lytta must be very cautiously given; and for obvious reasons I should hesitate before I ordered it for an unmarried female. The dose should be from ten to thirty drops. Dewees speaks strongly in favour of tincture of cantharides in this affection, especially when leucorrhœa attends the complaint. On the volatile tincture of guaicum, too, he relies as an almost never-failing remedy, after the system has been properly prepared by purgatives. Madder also he considers highly efficacious, more particularly if there exist any indications of an attempt at the menstruous action. This latter drug, indeed, was first recommended in delayed or suppressed menses by Sennertus, and after him received extraordinary encomiums from Riverius; it was again introduced into practice by Dr. F. Home. In this country we are now but little in the habit of depending upon it, or on any other specific remedy. The ergot of rye has lately been recommended for the purpose of insuring the periodical uterine secretion. I am rather inclined to doubt its efficacy in this particular; but sufficient trials have not yet been made, to enable me to speak positively as to its powers. It may be given in powder from ten to twenty grains twice or three times a day, or in infusion.

AMENORRHŒA SUPPRESSIONIS.

Symptoms.—In the second form, *amenorrhœa suppressionis*—those cases in which the secretions, having probably been formed with perfect exactness for many years, become suddenly or more gradually suspended or interrupted—we shall generally find that somewhat similar symptoms are present: there is the same loss of health attending the suppression, the same chlorotic and greenish cast of countenance, the same loathing of proper food, and the same symptoms of uterine irritation, and general derangement.

Treatment.—The means of relief, under such circumstances, are nearly similar, if there be no inflammatory disposition in the uterus. In addition, however, to those already mentioned, as applicable to the case of a young girl about the age of puberty, we have an opportunity of using topical applications, provided the patient

be married, and particularly if she have borne children. I allude to injections, which it is not advisable to use in the case of a young unmarried female. Now the application which seems to have answered the purpose best is one recommended by Lavagna, possessing ammonia as its active principle: eight or ten minims of strong liq. ammoniæ may be added to an ounce of water, and injected three or four times a day into the upper part of the vagina, for the purpose of stimulating the os uteri, and through it the whole of that organ: it should be used, indeed, of such a strength as to produce a little uneasiness in the parts themselves; so that we may augment the proportion of ammonia till such a result is obtained. We must be careful, however, to employ a syringe free from oil when giving this injection, because, as you will learn from your chemical lectures, oil and ammonia have such a strong affinity for each other, that they readily amalgamate and form a saponaceous mass; thus the effect of the ammonia becomes nearly destroyed, at any rate is much diminished.

Various causes, and corresponding treatment. —Occasionally, however, the suppression is produced by inflammation of the uterus itself. The patient, perhaps, while the subject of the discharge, is exposed to the action of cold, either by getting wet through, by standing on a stone floor, walking in damp streets, or by merely sitting when heated in a current of air;—a shivering succeeds—the menstrual discharge suddenly ceases—great weight and pain, rendered acute by pressure, is felt in the uterine region, with dull heavy pain in the back and thighs. There is heat of skin; thirst; restlessness; quick, sharp, hard pulse; furred tongue; perhaps vomiting, and other indications of fever. An interruption, with similar symptoms, has been often produced by emotions and passions of the mind, especially those in which the finer feelings are much excited.

Here we may suspect that acute inflammation has taken place, and our practice would consist in bleeding pretty largely from the arm, as well as in the application of leeches above the pubes, or to the groins, and of cupping-glasses to the loins and sacrum. We may give a full dose of calomel in the first instance, and afterwards purgative medicines, salines, and antimonials. We must enjoin rest, the strictest antiphlogistic regimen, and allow nothing but the sparest diet. Perhaps the injection of warm water into the vagina might be of advantage; the exhibition of emollient enemata would be useful in all cases; the warm whole, or hip-bath should not be neglected.

Again;—the suppression is attended occasionally with an appearance of very full health; a ruddy or rather bloated countenance; full pulse; appetite not impaired; and most of the functions apparently going on well. Occasionally there is headache and epistaxis, or hæmoptysis, and cough. In this case also we may generally bleed with freedom; we must attend particularly to the evacuation of the bowels for some time; we must give light food sparingly, and saline medicines. And if the discharge be not restored when the system has otherwise acquired a more healthy condition, we may be induced to try, first the madder, then the guaicum; and failing in re-establishing the secretion by these means, we may have recourse to the lytta, or secale cornutum.

It has been too much the custom with medical men, as is well observed by Sir Charles Clarke, to treat amenorrhœa as an idiopathic disease; whereas, it is much more frequently merely symptomatic of general or local derangement; and as this evacuation is a secretion, we might expect it, as well as all the other secretions of the body, to be most duly formed when the general health is the least impaired. The best means, therefore, of eliciting the discharge is by restoring a healthy state to the system generally. We know that in that constitutional derangement called *fever*, the secretions from the liver, salivary glands, skin, and all the mucous surfaces, are suspended or lessened, but that they return with the decline of the febrile paroxysm. Would any person in his senses attribute the fever to the want of all or any of these secretions? Would he endeavour to relieve the patient by exhibiting specific medicines to stimulate each of these organs for the purpose of re-establishing their functions? Certainly not; he would look upon the fever as the cause, not the consequence, of the suppression; and he would restore the secretions by removing the fever. But change the case: let obstructed menstruation be a feature in the disease; the patient is impressed immediately with the idea that the obstruction is the cause of all her suffering, and she will frequently succeed in producing the same impression on the mind of her medical attendant. From that time he disregards the primary cause, and directs all his attention to the uterus, and all his efforts to the restoration of its peculiar functions, by the use of stimulating remedies. Nothing can be more unphilosophical than such a mode of proceeding;—no practice can be more injurious. It sinks the science of medicine beneath the level of the commonest mechanical art, and degrades it to the meanest empiricism. It must lower it in the estimation of the public, and disgrace it in the eyes of its professors.

Amenorrhœa is sometimes the conse

quence of a worn-out or highly-debilitated state of the system. Thus in the last stages of pulmonary consumption and dropsy, usually some months before death, the menses cease to appear.

AMENORRHŒA DIFFICILIS, OR DYSMENORRHŒA.

Character.—*Amenorrhœa difficilis*, or as it is more properly termed, *dysmenorrhœa*, is characterized by a periodical return of pain in the uterine region and loins, attended with a flowing of the menstrual discharge. This disease is not confined to any period of menstruating life, but it is generally met with before the middle age; single as well as married women are liable to it.

The attacks usually recur every month, and last three or four days, each paroxysm of pain continuing a few minutes, a quarter of an hour, or longer. The discharge is in most cases sparing in quantity, but sometimes is more profuse than usual. During the interval of the month, there is a perfect freedom from uneasy sensation. The pain seems to be occasioned by an unnatural determination of blood to the uterus, or rather a morbid irritability of its nerves, and perhaps spasmodic action in the uterine structure itself.

Causes.—It is generally difficult to assign any remote cause: it has been traced to suddenly suppressed menstruation;—to cold caught after miscarriage; and Dewees observes that in many instances he has known it follow the consummation of marriage.

Symptoms.—The pain which constitutes the disease, is, in itself, the chief symptom, and as the uterus sympathizes so perfectly with every other organ of the body, we observe all the great functions are affected by the uterine derangement. Generally headache, sometimes vomiting, and occasionally rigors, attend the pain. During the attack, there is almost always observed a great depression of strength and universal languor of the system; cold hands and feet; pallid lips and shrivelled countenance; the pulse weaker, and rather quicker than natural; an inability or disinclination to move; and much impaired appetite. Hysterical affections of the most violent description, delirium, and actual convulsive fits, sometimes accompany this state. The uterine affection is not unfrequently attended with spasmodic pain in the bowels, or violent bearing down efforts in the the abdominal muscles, as if there was some substance to be expelled from the uterus itself.

Treatment.—The treatment resolves itself into two points of practice; first, to relieve the pain during the attack; and secondly, to prevent a recurrence of the paroxysms; by which an effectual cure is obtained.

During the fit.—During the pain, nothing gives so much relief as opium alone, or what is better, in combination with camphor or ipecacuanha. You may exhibit the former drug in any form by the mouth, and also the rectum; but if the stomach reject it, or it produce headache or nausea, we must either trust to it in enema, or to some other anodyne remedy: a drachm, or a drachm and a half of the tincture of opium may be injected, or two grains may be introduced as a suppository. The stomach must be allayed, if irritable, by effervescing draughts, and the bowels kept soluble by small quantities of saline purgatives. The warm bath, hip or foot bath, will be found of essential service. The recumbent posture is always advisable during the menstrual period; and if the pain be very severe, leeches, fomentations, or opiate liniments, may be used, and perhaps, in some instances, a small quantity of blood taken from the arm may produce relief.

My friend Dr. Mackintosh, of Edinburgh, who has so strongly advocated the use of the lancet in the cold stage of intermittent fever, has formed quite a new theory respecting the cause of dysmenorrhœa, and introduced a new mode of cure. He attributes the pain endured to a constriction of the os uteri, of such an extent as to prevent the free flow of the secretions; and he proposes to cure the disease by introducing a bougie within it to dilate it. He reports some cases in which success attended this practice; but I do not think it has received the general sanction of the profession.

General Treatment.—For the permanent cure, we shall probably derive most advantage from a continued purgative plan, followed by a slight mercurial course, and at the same time the exhibition of tonics, such as any of the bitters: afterwards a course of steel. Here also, perhaps, we shall find the sulphate of iron, uncombined with chemical preparations likely to decompose it, the best form. Impregnation will cure this affection, for a time at least, and perhaps for a permanency.

SECRETION OF A MEMBRANE WITHIN THE VIRGIN UTERUS.

In some cases of dysmenorrhœa, small coagula are expelled, together with the menstrual secretion: in others, it happens that, instead of evacuating a fluid every month, the uterus secretes a membranous or half-organized substance, which is expelled with pain and flooding, in a similar manner to an abortion. Morgagni describes this membrane very accurately. He says, it is smooth within, as if it contained a fluid, and rough or irregular on the surface next the uterus; and is triangular, corresponding with the uterine

cavity; he adds that its evacuation is followed by the lochia. Dr. Denman, who also gives an excellent history of the affection, considered that this membrane was secreted by the uterus, like the membrana decidua, and supposed that no woman could conceive who was afflicted with this disease; but some cases are detailed, and especially, as Professor Burns remarks, one by Morgagni, which refute Denman's idea, that barreness is a necessary consequence. It is a matter of some importance that we should bear in mind the possibility of such a membrane being formed within the virgin uterus, because it so much resembles the decidua, that it might be mistaken for a broken ovum, especially as its expulsion is always attended with pain, and mostly followed by sanguineous discharge; and the character of a young woman might suffer severely unless the medical attendant was prepared to give an explanation of the circumstance.

We may easily distinguish it from the ovum by looking at the internal surface: in the ovum we shall find the smooth, glossy, pellucid amnios, which is wanting in the case under consideration. Chaussier mentions an instanee indeed where this membrane presented entire at the os uteri, and was pulled away by the fingers: it contained a bloody fluid, and might easily have been mistaken for an ovum. It occurred to me on one occasion to be the means of completely disabusing the minds of a young unmarried lady's friends, who were most painfully distressed by observing this membranous formation. It was suspected, both from the appearance of the membrane, as well as by the pain endured, that one or more miscarriages had taken place. I was referred to by the family medical attendant, and I had the high gratification of quieting the unfounded suspicions which had been excited, and of converting distrust and anxiety into confidence and happiness.

Treatment.—The mere prescribing of medicine in this disease will be found of little use, beyond allaying immediate suffering; by a judicious combination of medical and general management we shall, perhaps, be able to effect a cure. The obvious indications are to relieve the pain during the menstrual action, and to alter that morbid condition of the uterus, which predisposes it to produce this unnatural formation. For the first object, we would use opiates, warm water injections *per anum,* and perhaps *per vaginam*, and the warm bath; paying particular attention to the state of the bowels: leeches might be serviceable. For the second, a slight mercurial course, with tonic medicines, and changing completely the mode of life, would be found the most beneficial. For married women, we might add to our other means, some slightly stimulating injection, such as sulphate of zinc and camphor, or a weak solution of ammonia; with the hope of producing a change of action in the uterus.

IRREGULARITY IN THE RECURRENCE AND QUANTITY OF THE MENSES.

It is occasionally observed that the menses appear in a particular individual very irregularly; sometimes occurring at the end of a fortnight, at others not for five or six weeks. They are irregular also in regard to the time they continue flowing, and to the quantity produced at each period.

This is inconvenient for the woman, because she is quite at a loss to know when to expect their appearace; but if the case be not attended with any pain, fever, or other functional derangement, it may be looked upon as a natural peculiarity of constitution, must be considered of no consequence, and no means should be taken with a view to regulate the return.

CLINICAL OBSERVATIONS ON NERVOUS DELIRIUM.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

An operation is cleverly performed; the assistants are astonished at the dexterity of the surgeon; yet accidents the most serious may supervene, and threaten the life of the patient. Sometimes a violent inflammation seizes the extremity which has been operated upon, or some internal organ is attacked, and the patient carried off at the very moment when success seemed certain; sometimes purulent absorption sets in, announced by shiverings and erratic fever; and again, the nervous system, being irritated, gives rise to painful spasms, which frequently terminate in fatal tetanus; or, finally, the brain, agitated by torture, by fear, nay, by joy, forms conceptions which are no longer in correspondence with external objects, and reason quits the patient at the very time when its presence would be most valuable. It is on accidents of this nature, said M. Dupuytren, that I wish to-day to fix your attention; but obscure as it is in its source, variable in its progress, and frightful in its symptoms, nervous delirium seldom proves fatal when it is met in time by a proper remedy.

In order to give you a clear notion of the nature of this complaint, I shall cite for you some cases.

Case I.—*Fracture of the Leg—Delirium—Death—Medico-legal considerations.*

A man was brought into the Hôtel Dieu on the 5th December, 1831, having his leg broken in a quarrel at a *café*. The fractured limb was in a very contused state; the upper fragment had torn the soft parts, and made through the skin a triangular opening. The fracture was reduced, but during the whole night the patient never ceased uttering the most distressing cries. At the visit in the morning he seemed as if he were buried in a fit of intoxication; during the dressing he uttered the cries again. I observed at the time, that this want of moral courage, or excessive sensibility, betokened a depression of the mental powers, which always favoured the development of grievous accidents. He was bled three times. Next day he was better; but the day following he became delirious; his ideas were incoherent and confused. This was the day on which his friends were allowed to come in and see him; patients on those occasions almost always receive aliments which are unsuited to them, or circumstances occur which tend to aggravate their condition. Was the change now observed in the patient owing to this cause, or to some other? It was found that he had experienced a vexation arising from some private concerns on which his mind was engaged; and in his delirium he never stopped repeating that his removal to the hospital was his ruin. Leeches, with cooling potions, and a lavement of assafœtida, were administered; but it was all in vain; on the morning of the 9th he expired.

The death of this man gave rise to several important questions. Was he the victim of one of those internal inflammations which frequently give no note of their presence, except by the fever or delirium which they originate? Or had he perished in consequence of the fracture, or the profound lesion which it caused in the nervous system? Besides, justice interfered in the matter; and I was called upon by the legal authorities to satisfy them whether the fracture was occasioned by a fall the individual had had in the scuffle in which he was involved, or whether it was directly caused by kicks inflicted on the leg?

At the post-mortem examination I took the opportunity of observing, how difficult it was to conceive that such a fracture should be occasioned by a mere fall; that in this particular case it did not seem probable; and, to be barely possible, it would require the concurrence of a variety of circumstances which could not be easily appreciated. On the other hand, a fracture of this kind might well be the result of many different causes, such as a fall from the first story of a house, or the passing of a carriage wheel over the leg, &c. It seemed, therefore, to be impossible to say precisely how the accident occurred; and the case affords a good example of the necessity there is in such circumstances of proceeding with caution, when reports are to be drawn up for the purposes of justice.

Inspection of the fractured limb shewed that the parts had been violently dissevered: the tibia was reduced to several fragments; the fibula was divided; the soft parts were contused and lacerated; the pleura of the left side contained a pretty large quantity of blood; the brain was healthy.

Case II.—*Delirium after an Operation—Treatment—Cure.*

M. R., a tradesman, aged 25, of nervous temperament, lymphatic, and possessed of no great mental power, was operated on for a voluminous sarcocele. Frightened at the thought of a hæmorrhage, he was restless during the whole of the day after the operation. On the day following his agitation was increased; the least movement or word annoyed and alarmed him. No accident, however, as yet occurred; but presently he complained of pains in his limbs and chest. His eyes became bright; he breathed with precipitation; he called for food, and wanted to get up. His intellect became disturbed; he scouted those who came about him to render their services; and he loudly called for his family, who were not near him. The whole body was in motion; his cries, the glistening of his eyes, with their pupils immoveable; his face covered with perspiration, and his pulse calm and regular in the midst of this tumult, left no doubt of the presence of nervous delirium. The patient complained loudly of the pains in his chest, though no examination could detect what was their nature. M. Dupuytren ordered, what he usually does in like cases with great success—namely, a demi-lavement, with six drops of laudanum, which was given immediately. Some of the patient's friends, who were alarmed, were sent away; and he was left strictly by himself. He now ceased to be talkative, and fell asleep; he did not awake till next day, when he was quite free from all delirium. In five and twenty days his cure was complete.

Case III.—*Delirium after a Fracture—Treatment—Partial Recovery.*

Langlois, a mason, aged 26, came to the Hôtel Dieu in the month of May, for frac-

ture of a rib occasioned by a fall from a house. A bandage was tightly put round his chest, to secure the immobility of that part—a proceeding necessary for the cure. Those fractures in general go on so favourably, that no particular attention was paid to the patient; but he was seized on the third day with delirium, which gave him no rest. He was agitated in a thousand ways; all his muscles were in a state of continual tension; his eyes bright, and skin covered with sweat; his pulse alone was calm. Langlois thought he saw constantly before him figures floating in the air; he fancied there were physical experiments being performed on his bed, and that all the patients in the ward were undergoing the same treatment. This disturbed him much; and he knew not whether to submit or to resist. Being of a sanguineous temperament, he was bled; but this produced no effect. A lavement with ten drops of laudanum was then given him, with better success. Next day the dose was doubled, but with no great improvement. He was now so noisy and troublesome to the other patients, and so much excited by the people moving about, that he had to be put into a separate chamber. The laudanum was increased to forty drops; and under this treatment the delirium subsided. But the man had suffered so much by the continuance of his agitation at a time when repose was wanted, that the pleura, already irritated by the roughness of the fractured rib, became inflamed, and the lungs were seized. Cough, with bloody expectoration, showed the presence of intense pneumonia, which was evidently aggravated by the repeated occurrence of the original cause during the violent fits of coughing. He was treated with venesection, calming potions, and revulsives, and seemed at length cured; but his convalescence was not satisfactory; he was pale and feeble. He had frequent cough, oppression, fever; and on leaving the hospital after a residence of two months, he appeared labouring under chronic pneumonia.

Case IV.—*Attempted Suicide — Delirium — Treatment.*

Vincent Français, aged 32, a chasseur of the Royal guards, having met with some annoyance, determined to destroy himself. He got drunk, went into the church of Notre Dame, and cut his throat. He was carried immediately into the Hôtel Dieu. The integuments were divided from one angle of the jaw to the other; some of the muscles were cut; and the instrument had penetrated even to the pharynx, between the hyoid and thyroid cartilage. He was dressed and guarded. On the second day delirium seized him, and he was wrapt in a strait waistcoat. A calming potion, containing half an ounce of syrup of diacodium, produced but little effect on him. He at last, however, became rational; but the disturbance of the previous four and twenty hours gave rise to severe accidents; smarting pain, and a feeling of strangulation, with violent cough and purulent expectoration, all came on rapidly. The wound assumed an ill appearance on the fourth day, and on the seventh delirium again returned. The same remedies were used with success. The man, however, was in rather a precarious state for some time; and it was not till after fifty days that he was pronounced out of danger.

Case V.—*Delirium following seven voluntary Wounds.*

L. N., aged 35, a perruquier, having spent in a short time a pretty considerable sum of money, which he had been long and painfully amassing, gave himself up to profound melancholy. The loss of his place, too, in the house where he worked, augmented his despair, and in a moment of fury he inflicted on his person seven wounds by a pair of scissars—three of which were of considerable depth. Being taken to the Hôtel Dieu, he was immediately bled and treated with sedatives containing laudanum. The delirium was not calmed. On the second day a new bleeding was practised, without the state of the patient being improved: he thought himself pursued by the police, and as he wanted to escape them, he was confined with a waistcoat. Yet, notwithstanding all this disturbance, the pulse was by no means frequent; the tongue was clean, and the body covered with an abundant sweat; the appetite also was good, only N. would not eat for fear of the police. For two days this state of things continued, although other bleedings and antispasmodics were tried. On the fifth day, M. Dupuytren prescribed two lavements, with ten drops of laudanum in each. They were scarcely administered when the delirium ceased; and at the end of six days it had entirely subsided, in consequence of the lavements.

About a fortnight after, this man was brought back to the Hôtel Dieu, having made a second attempt on his own life. Nervous delirium again occurred, and it was cured by the same means.

Case VI.—*Delirium after Keratonyxis.*

M. R., when about 58 years old, found her sight gradually impaired: at 61, she was unable to distinguish day from night. When she came to the Hôtel Dieu both crystallines were perfectly opaque. M. Dupuytren operated on her by keratonyxis in his usual manner. She suffered from frequent vomiting after the operation,

but this was subdued. On the third day she had headache and burning tears: foot-baths and lavements were given. Subsequently, intense inflammation of both eyes and eye-lids set in. A portion of the cataract reascended, and formed an opaque semilunar curtain. Other accidents occurred to the eyes, but these are not at present to the point. On the night of the fifteenth day, very intense nervous delirium endued: the strait-waistcoat had to be applied. Antispasmodics and sinapisms were at first ordered; but on the seventeenth day a quarter lavement, with eight drops of laudanum, brought on sleep, and by a continuance of the remedy the disorder was completely removed.

Case VII.—*Fracture of the Fibula—Delirium.*

E. M., aged 54, performing an awkward evolution while coming down stairs in a state of perfect drunkenness, missed his footing and fell on his left side. On being carried into the Hôtel Dieu, the house-surgeon recognized a fracture of the lower extremity of the fibula, with rupture of the internal malleolus at its base. The limb was placed in the bandage which is ordinarily used for fracture of the leg. Severe pain and swelling about the joint. Next day, M. Dupuytren applied his appareil and administered resolvents. On the third day the pain ceased, and the swelling came down: but this was followed by violent delirium, that required the strait-waistcoat. A quarter lavement, with from eight to ten drops of laudanum. Reason was restored on the following day, but became again disturbed a day or two after. In the end, however, the accidents gave way to the lavements. The fracture went on favourably, notwithstanding the different disturbances: consolidation was complete by the thirty-sixth day, and the limb was free from any deformity.

The preceding cases will serve to introduce what we have to say of the history of nervous delirium, or, as some call it, after the exciting cause, *traumatic* delirium.

Symptoms.—Its approach, sometimes indicated by the actions and incoherent movements of the patient, is most frequently sudden and unexpected—when the individuals affected are seemingly in the most favourable state. It is manifested by a singular confusion of ideas about places, persons, and things. Harassed with sleeplessness, the patient is generally overpowered by some prevalent idea connected with his profession, passions, taste, age, or sex. He labours under perpetual jactitation. The upper parts of the body are covered with profuse sweat; the eyes glisten, and are injected; the face brightens up—is flushed; and menacing words are uttered with extraordinary loquacity and alarming cries. Such is the insensibility which some patients display when thus affected, that we have seen them, when labouring under comminutive fractures of the lower extremities, tear off the bandages and walk about, supporting themselves on the broken limbs, without betraying the least pain: others, with fractured ribs, shake themselves and sing, without shewing any symptom of suffering; and some, in fine, who have been operated on for hernia, introduce their fingers into the wound, and coolly amuse themselves with tossing their intestines about, as if it were those of a dead body they were handling.

But serious as are these symptoms, the pulse, tranquil and calm, experiences no other disturbance than that which arises from the disorderly movements. There is no fever; the excrementitial functions proceed with their usual regularity; but the appetite fails; and after two, four, or five days, the complaint terminates in death, but much more commonly in recovery. If the latter be the result, it occurs without a crisis, and pretty much as the disorder itself begun. Exhausted with fatigue, the patient is seized with a deep sleep; whence he awakes with perfect intelligence, but without any recollection of what has passed: he is weak, and very sensitive. The appetite returns; the former complaint resumes its course, and every thing proceeds regularly. The delirium may, however, return two or three times, leaving the patient weaker and weaker after each attack; and the periods of intermission may be one or several days.

The state of the circulation, calm and tranquil as it is amidst all the disturbance, is certainly very remarkable. You see a patient furious, distracted, the sweat pouring down his face, his eyes glistening, his voice raised to the highest piteh, and you think him the victim of burning frenzy. Approach him: his pulse is calm, regular, and the state of his skin banishes all idea of an inflammation. It is a true mania, differing from that which is commonly met with only in its duration: the utmost time that it lasts does not exceed five or six days.

Causes.—Nervous persons, of a pusillanimous nature, whose brain is affected by some vivid fancy, are most exposed to this delirium. It is so frequently the case with suicides, that some have thought it was peculiar to them. Nor are the athletic exempt from it. Women are less commonly attacked by it than men; and there is no instance of its having affected children.

Nervous delirium may of itself be dangerous. I have seen (said M. Dupuytren) a young man, of vigorous constitution,

who was seized with this affection in consequence of a simple excoriation of one of the toes, sink under it in eight and forty hours; the primary affection not seeming to have had any influence in causing the catastrophe. In the great majority of cases, however, we must reckon upon having the delirium the more severe the more serious the accidents that give rise to it. Thus we have much more reason to anticipate an unfavourable issue when it arises from fractures of the extremities or of the ribs, or after wounds of the throat, than when it results from simple wounds, such as are in themselves but trivial *.

Inspection after death, moreover, discovers, neither in the cerebro-spinal system nor other internal organs, any material lesion that would explain the symptoms present during life, nor give any satisfactory reason for death.

Treatment.—Sedatives of all sorts, bleeding pushed even to fainting, revulsives, and all other means which I used to see employed, and which I myself was for some time in the habit of employing, have all proved to be inefficacious in this disorder; for they neither affected its progress nor its intensity. Narcotics (such as the liquid laudanum of Sydenham) taken into the stomach, have not been more beneficial; and it is easy to explain this deficiency of virtue in them on a physiological principle. The stomach is endowed with powers of digestion, and contains juices which disorganize, more or less, the substances which come in contact with it; so that much of the medicinal matter introduced into the organ remains inefficient, because it is mingled with the aliment. This is the reason why there are so many medicines, of the vegetable class more especially, the virtues of which are so uncertain and evaneseent in numerous cases.

It was owing to the evident inutility of those divers remedies, and the conviction I had of the effects of the stomach on medicines, that I was induced to make trial of a method which has constantly succeeded in my hands, and which, indeed, may almost be looked upon as specific. This method, as simple as it is powerful, consists in merely adding a few drops of laudanum to a lavement. Five or six drops to a quarter lavement, produce a greater effect than thrice the quantity introduced into the stomach. The reason has just been assigned; but it may also be added that the rectum, which is destined to be the reservoir of the residue of digestion, absorbs and does not digest; and hence the medicinal substances which are committed to it (and more particularly when they remain for a time without being expelled) must more certainly come to their destination. Those lavements should be repeated twice, thrice, or four times, at intervals of six hours. When they are retained, they are perfectly sufficient to subdue even the most furious delirium.

* It is not a little singular that habitual intemperance should be omitted among the causes enumerated by M. Dupuytren: possibly he would have it understood that his *délire nerveux* is a totally different complaint from the *delirium tremens* of other authors.—Transl.

EXTRAORDINARY CASE OF

DIFFICULT DEGLUTITION;

AND OF

TUBERCULAR PHTHISIS.

To the Editor of the Medical Gazette.

Sir,

I think you will find the enclosed a very interesting case. It is one in which a considerable difficulty of deglutition existed without any apparent cause during a great portion of life. It is also an example of tubercular phthisis and extensive abscesses of the right lung in the same patient, which were indicated by no evident or discernible symptoms. On writing the account of it this evening for your valuable journal, my principal fear has been lest I should transgress the bounds which you may be willing to assign it; and as I find on perusal that I cannot easily abridge, I hope you will consider it of sufficient importance for an insertion in an early number.—I am, sir,

Your obedient servant,
Edward Harmer Sheppard.

37, Somerset-street, Portman-square,
November 18, 1833.

The subject of the present notice was the lady of a respectable surgeon in this metropolis, who died only a few weeks since, and as the case is one of great interest, I take an opportunity of laying the particulars of it before my professional brethren. Having had the pleasure of an intimate acquaintance with the family for some years, I have been enabled to observe attentively the progress of the symptoms.

Mrs. ——, a lady, ætat. 31, of delicate habit of body, though generally very

healthy, complained about fourteen years since of an increasing difficulty in swallowing. For some years previously she has said that she constantly experienced an uneasy sensation in the throat during deglutition, and was averse to taking a large mouthful of food. However, about that time the difficulty appears to have progressively increased, and she has ever since been unable to swallow a morsel of solid aliment of the size of a large pea; and though she objected far less to drinking any fluid, yet this was taken equally slowly and carefully. And although every article of her diet has been always minced up in the most delicate manner, and in the smallest compass, she felt a constant fear and repugnance to its passage through the œsophagus, and daily expressed up to the day of her decease, her conviction that she should die from suffocation, or spasm in the throat. I have myself several times examined the appearance of the exterior of the throat and neck during the operation of deglutition, and it has appeared that there was no impediment to the course of the food, at least not till it had passed into the thoracic portion of the tube, and then a slight spasm only seemed to be produced. She was in the habit of describing the sensation occasioned by swallowing too large a morsel, as giving a sudden and spasmodic pain in the gullet when it had reached the upper part of the chest, and, as it were, having its course arrested at that spot, and its further descent accompanied with great difficulty and effort: so that from this circumstance, and that of feeling no uneasiness or inconvenience in the pharynx and upper part of the tube, and the food passing readily through these, she had an impression that a tumor existed in the thorax, by the pressure of which on the œsophagus, this latter was nearly closed. And I must confess that my own opinion relative to the cause of this distressing complaint was nearly similar, as likewise was that of some other respectable gentlemen. Formerly I suspected that it might be an hysterical affection; but the long continuance, constancy, and unchangeable nature of the symptoms, and the non-effect of medicine, soon convinced me of its impossibility.

About ten or twelve years ago, before I had the pleasure of her acquaintance, all her medical friends entertained no doubt but that the case was that of a simple stricture, and wished her to have a bougie regularly passed, in order to effect a cure. To this she had great objections, but was at last induced to consent, through the kind remonstrances of Sir Astley Cooper; when on passing the instrument, to his surprise it soon reached the stomach, without meeting the least resistence, and the whole extent of the tube felt healthy. The patient, however, suffered very considerable spasmodic pain from the operation.

About three years afterwards, as the dysphagia still continued, it was recommended that another attempt should be made. This was effected in the same manner, and with the same results, as the former; and as it was productive of so much pain, and unaccompanied by any beneficial effects, it had not since been repeated.

It is a circumstance worthy of remark, that this same difficulty of swallowing was experienced by the grandfather, father, and uncle of the lady. The former is said to have died from spasm of the stomach, the father from suffocation from inability to swallow, and the latter from a similar complaint, the description of which is not known, as his death took place suddenly, in a remote country village. On this account, and on that of her having a son, to whom she was much attached, and who she feared would experience the same complaint, she has often expressed a wish that, after death, the state of her throat might be examined.

Notwithstanding the above distressing complaint, Mrs. —— was usually accustomed to enjoy good general health and spirits. Between two and three years since, she had a rather severe though second attack of measles; yet the chest symptoms were moderate: there was a slight cough, which lasted only a few days, and the shortness of breathing yielded to a blister, without, I think, the necessity of venesection. Notwithstanding this, a great degree of debility remained, and considerable delicacy of constitution. Change of air, however, for a time, restored her wonted energy; but it was soon afterwards evident that debility returned, and continued to increase, without any apparent cause. There was no cough, no pain in the side, and no apparent affection of the chest. The patient was in this state only about four months ago, and indulged the hope of spending the autumn in the country,

and entirely regaining her former health; but a sudden change of weather, and an unusually cold and damp state of the atmosphere, brought on a rheumatic affection of the shoulders, which was succeeded by simple fever. These, however, in a great degree subsided in about a fortnight, but from being of a spare and delicate habit, she was so much reduced, that she was obliged to confine herself to her room. The symptoms were then chiefly those of debility, but there was also a degree of shortness of breathing, and pain in the back.

Under these circumstances, it was thought advisable to call in the assistance of an eminent physician; and although no disease of the chest was suspected, he was requested to make use of the stethoscope. This he did in a most careful and scientific manner, and pronounced that the lungs were in a healthy state. The pain in the back soon subsided, and the dyspnœa continued to vary in degree, and occasionally almost disappeared. There was *no cough*, no pain in the side, and no sense of tightness across the chest; the bowels soon became irregular; the pulse was hard, and rose in frequency to 120; a degree of pain was felt on pressure over the region of the liver, with a difficulty of lying on either side, but more particularly the left; the tongue presented a smooth red appearance, with great redness of the tip and edges: all which symptoms were a certain evidence that some dangerous organic disease was going forward, but its precise seat was by no means clear. As the disease continued, debility and emaciation increased; and towards the last few days of life only there was a slight tendency to cough, with uneasiness in the throat, and difficulty of articulation. And when death took place, it came on most suddenly, and was caused by an inability to expectorate a quantity of puriform fluid, now for the first time apparent, and by which the bronchia seemed to be completely filled.

Post-mortem examination.—The examination of the body took place three days after death, and was conducted in a very scientific manner by Mr. Pilcher, of the Borough, in the presence of two other medical gentlemen and myself. The state of the œsophagus and neighbouring parts was the first object of investigation.

The thyroid gland was of its natural size; its cells were rather enlarged. The whole extent of the trachea and œsophagus presented a natural and healthy appearance; and from the base of the cranium, as far down as an inch or two inches below the lower part of the pharynx, all the neighbouring vessels and nerves were in their natural and relative situations. But from this point downwards, the *par vagum*, instead of being placed on each side, and at the usual distance from the œsophagus, *were situated quite close, and almost in connexion*, with the posterior and lateral parts of this tube; so much so, that a small substance, of the size of a pea, could not possibly be swallowed without causing pressure on their substance. The stomach was healthy, though rather larger than usual; yet about its pyloric extremity there were small patches of chronic inflammation of its mucous membrane.

On examining the interior of the trachea, there was found much chronic inflammation of its lining membrane. The larynx was in a state of acute inflammation, and its cartilages were completely covered with its result — coagulable lymph, by which a firm adhesion had taken place between these and the upper part of the œsophagus. The inflammation had evidently extended to this part of the latter tube, so much so, that on detaching it from the larynx and the trachea, and opening its whole extent, the mucous membrane, to the length of an inch of its superior part, showed evident signs of recent inflammation: it was highly vascular and considerably thickened, and at the junction with the pharynx, was almost impervious. With this exception, the whole of the rest of its extent was healthy. That this morbid appearance of the upper part was quite recent, and an extension of the cartilaginous inflammation, was very clear; and it is likewise certain that it did not exist long before death, by the fact of the easy passage of the food through this portion, and also by that of the bougie. It would appear, then, that the dysphagia must be wholly attributable to the malposition of the pars vaga; and the above appearance of the latter will easily account for the symptoms of the former.

The chest and abdomen.—On removing the sternum, the strongest adhesions were observed between the pleuræ. The left lung was tuberculous throughout,

the tubercles varying in size from that of a pin's head to a large pea, particularly the upper portion, where there were two or three vomicæ, one of which contained nearly an ounce of pus. In this cavity of the chest was found about half a pint of serum. The right lung appeared to be nearly absorbed, one portion of it only being visible, which was collapsed into the space of a small lemon, and its substance scarcely recognizable. Its site was divided into three cavities, bounded by cysts, formed by adhesive inflammation; the superior and largest of these contained about a pint of pure pus; the second about half that quantity of muco-purulent matter; and the third about a pint of serum. The bronchia were affected with chronic inflammation, and were filled with purulent matter, which appeared to have come from the rupture of a vomica in the left lung. The heart was of a soft texture, but of its natural size, and the pericardium contained about an ounce of serum. The liver was healthy, as were also the other abdominal viscera.

I should have wished to have made a few observations on the foregoing case, but I feel that I am trespassing on those limited bounds, beyond which, in a valuable journal, it is not right to transgress. The case, indeed, affords ample grounds for reflection and remark, particularly the connexion of the chest appearances with the observable symptoms, and not less the misguiding result of the stethoscope, although it was in the most scientific and experienced hands, and used with the greatest attention and care.

CASE OF EMPYEMA CURED BY PARACENTESIS ALONE.

To the Editor of the Medical Gazette.

Sir,

If you think the inclosed case worth insertion in your journal, it is at your service.—I am, sir,

Your obedient servant,

Geo. Woolley,

Member of the Royal College of Surgeons, and one of the Surgeons of the Chelsea, Brompton, and Belgrave Dispensary.

8, Brompton-Row, Nov. 20, 1833.

On March 14, 1833, I saw George Louch, aged 5½ years; he had been a healthy child till the preceding November. At that time he became the subject of fever, attended with inflammation of the brain, from which he was scarcely convalescent when he had an attack of pleuritis on the left side. He appeared not to have perfectly recovered from the latter. His mother said that there remained cough, accompanied sometimes by pain, want of appetite, and weakness; that he had not since the attack been able to leave the house, had latterly become much worse, and she thought his chest had grown out on the left side. I found him very much emaciated, labouring under hectic fever, pain in the left side, great dyspnœa, harsh dry cough, constant thirst, entire loss of appetite, disturbed sleep and delirium at night. On examining the thorax, it was obvious to the eye that the left side was larger than the right, which was also proved by admeasurement; and there was an even and smooth appearance of that side, from dilatation of the intercostal spaces. The heart was pulsating on the right side, in a situation precisely corresponding with that which it ought to have occupied on the left. On percussion, more or less dulness of sound was observable over the whole of the affected side, but most at its lower part. Auscultation shewed the entire absence of respiratory murmur on the left side, anteriorly and laterally; it was heard posteriorly all along the spine, but the sound was less loud than natural, and was accompanied by mucous rattle.

These circumstances seemed sufficiently to indicate that the left pleural cavity was occupied by pus, the lung compressed, and the heart pushed to the right side of the chest; and as the symptoms were urgent, I conceived it to be my duty to remove the fluid by paracentesis, as speedily as possible. Mentioning the case to my late talented friend, Mr. T. Alcock, in the presence of Dr. Roe, of the Westminster Hospital, that able and zealous physician thinking it one of interest, expressed a desire to see it, and be present at the removal of the fluid, which afforded me the advantage of obtaining his valuable opinion. We saw the patient together on the evening of the next day (15th), and Dr. Roe, after a minute investigation of the case, concurring entirely in the opinion I had previously formed, I proceeded to perform the operation.

The child sitting on his mother's lap,

and supported by her, a small flat trocar was passed into the thorax, through the interspace between the seventh and eighth ribs, at the part where the digitations of the serratus magnus and external oblique muscles meet. Pus of a healthy character flowed freely through the canula; and two basins full were abstracted, measuring forty-three ounces. A considerable quantity also escaped by the side of the canula, and ran down, wetting the mother's clothes completely through, so that probably not less than three pints altogether came away.

Towards the end of the operation, owing to the child being very unmanageable, it was impossible to prevent a good deal of air from passing into the thorax, which occasioned severe coughing, and ultimately obliged us to remove the canula before the pleural sac was quite empty. The aperture was carefully closed by a strip of adhesive plaister, and the little patient was returned to his bed; he soon felt much relieved, ate half a round of dry toast, and drank some tea, having taken nothing during the preceding twelve days but toast-water. An opiate was given to him, and he had thirteen hours of easy and tranquil sleep. On the following day the hectic fever, thirst, dyspnœa, pain in the side, and cough, had disappeared; and this absence of unpleasant symptoms continued for a few days. But the heart remained on the right side; there was no return of respiratory murmur anteriorly; percussion shewed the gradual refilling of the pleural cavity; and the symptoms came back, and were nearly as bad as ever.

On the 28th, thirteen days from the first operation, in the presence of Dr. Roe and another professional friend, the trocar was again introduced, but now between the ninth and tenth ribs, and two inches nearer to the spine. Thirty-eight ounces of pus were abstracted; the puncture was closed as before; the child slept well without an opiate; the symptoms all vanished, not again to reappear; and the little boy was soon playing about his room. Respiratory murmur gradually returned over the whole left side. The heart after some days began to remove to its natural situation, was soon found under the sternum, and in two or three weeks had re-established itself in its right place. As nothing remained after the second removal of the fluid but debility, which was rapidly diminishing, no medicine was given to the child, except once or twice something of an aperient nature when the bowels were not sufficiently open. He is now quite stout and healthy.

The only observation I shall make on this case is, that the rapid and favourable convalescence of the patient appears to me to be attributable to closing and healing the puncture immediately after the operation.

CONTRIBUTIONS TO PATHOLOGY.

By John Alexander, M.D.

One of the Medical Officers to the General Dispensary for Children, Manchester.

VERMINATION.

In the autumn of 1830 my attention was first particularly drawn to the subject of this paper from the following circumstance:—I had been attending for some days a child, five years of age, labouring under convulsions of a very severe character, which had not appeared to give way in the least to the use of leeches, vesicatories, cold applications, aperients, and subsequently antispasmodics and the warm bath; when one evening, after a lengthened attack, threatening dissolution, a worm of the lumbricus teres species was expelled: the exhausted child sank into a long and profound sleep, and had afterwards no return of the convulsions. The case attracted my especial notice on two accounts. The child was a firm-fleshed little fellow, with a countenance any thing but verminative; and the most careful examination of the subsequent evacuations did not lead to the detection of any more worms, although appropriate medicines were persevered in for some time.

Vermination appears to have formed a favourite subject of speculation with the profession at all periods; for not merely have we on record respecting it the researches of Baglivi, Linnæus, Redi, Heister, Rudolphi, Butler, Lister, Black, Home, Simmons, Bremser, Schmucker, Hooper, Rush, Rhind, and a host of modern authors, but also the earlier views of Galen, Celsus, Avicenna, Pliny, and Hippocrates.

In the succeeding cursory remarks I purpose, chiefly, considering the disease as it is observed in early life.

Young children are subject to three kinds of worms—the ascarides (or small seat-worm), the cucurbitina (or short flat worm), and the lumbricus teres (or round worm). The fourth variety of human worm—the tænia, or tape-worm—I have, in my own experience, never known to be expelled by a young child; which, considering how much infested young persons are with worms, is somewhat singular, and not the less so as I have been informed by practitioners of undoubted credibility, that they have had such cases. However, the records of medicine and personal observation incline me to think the presence of tænia in the bowels of the young a rare disease; and I feel strengthened in this opinion by a late declaration of Dr. Elliotson's (made at St. Thomas's Hospital) that he does not ever recollect having witnessed a single instance of it. In Germany and Switzerland, I am aware that this form of the disease frequently affects the young.

The *cause* of vermination remains in utter obscurity: at one time it was said to be a weakened condition of the alimentary canal, overlooking the fact that this local debility is sometimes more an effect than a cause of the presence of these parasitic animals. It was supposed by some writers that worms are engendered by their ova being swallowed in our food; but to this specious explanation it was objected that the alimentary canal of animals is the *only* place in which certain worms are ever found, which of course would not be if the ova were imported from without. Again: other pathologists (Dr. Darwin amongst the number) have advocated the doctrine of worms being caused by a general inactivity of the absorbent system; but in what manner, they have, unfortunately for us, not proceeded to demonstrate. Lastly, these worms have been supposed to originate in peculiar intestinal secretions, and the great moisture of the young child's bowels has been adduced to support the hypothesis. But a very brief review of the theories to be found in medical writings, respecting vermination, will, I think, justify the assertion that nothing definite or satisfactory is known upon the subject, and lead us to agree with Dr. Baillie, that "there is nothing in the economy of animals more obscure than the origin of intestinal worms."

The most common variety of vermination is that form caused by the ascarides. These ascarides, or seat-worms, as they are sometimes called, are of a yellowish colour, vary as to length, being from a quarter to three quarters of an inch long, and have for their habitat the lower part of the colon, and the whole rectum more particularly. Another form of ascarides is also frequently observed, wherein the worm is extremely small, and hence called the thread-worm. This latter species, viewed through the microscope, is characterized by a sharp head; and when exposed to the air, immediately dies. The child, infested with either variety, is observed to have a pruritus equally of the anus and the nostrils, and to part with motions of a slimy character, small in quantity, but frequently repeated. If the number of worms be considerable, some headache, restlessness, and symptoms of dyspepsia, supervene, but not often to any very great extent. In these cases, tolerably large enemata, consisting of bitter aloes suspended in any bland liquor, as gruel or linseed tea, give immediate, and, if repeated, complete relief. It is advisable at the same time to administer small doses of rhubarb and scammony, to change the status or condition favourable to their regeneration. Enemata of Harrowgate water, bougies smeared with mercurial ointment, the smoke of tobacco, and iced water, have severally had their advocates, but are now seldom used, less objectionable means answering every purpose. Dr. Butler entertained the singular notion, that the presence of these worms was "nature's remedy for destroying the superabundant morbid humours, and for stimulating the first passages by their crawling motions, and thereby assisting the peristaltic action of the guts to carry off what remains of the offending load." Few persons, at the present day, will, I apprehend, be found to advocate Dr. Butler's ingenious view. Finally, with regard to the asearides, the curious in such matters, on referring to the first volume of the Medical Transactions, will there find a case, related by Dr. Heberden, of ascarides infesting the bowels of an adult, and resisting every mode of treatment which that talented physician and other practitioners could think of. And in a late work, published by Mr. Ryan, mention is made of these

worms having been found in the bladder. Such cases, however, are not met with every day.

The symptoms attendant upon the presence of the cucurbitina, or flat short worm, are much more numerous, and of a more general character. The nasal and anal pruritus are less perceived, but present; the temper is irritable, and the child subject to grinding of the teeth, starting, and low moanings during slumber; the countenance is of a pasty look; the skin yellowish; the eye dull, and frequently surrounded with a dark areola; the lips and nostrils are thick, swollen, and apparently œdematous; the breath in a morning is fœtid; the abdomen tumid, more or less hard, and frequently painful in the umbilical region. A sudden and severe pain at the stomach is a common symptom of vermination; as also are griping pains suddenly arising and as suddenly subsiding. The child's urine is either very plentiful and pale, or, what is much more usual, scanty, thick, and of a milky appearance. The fæcal dejections are extremely irregular: at one time constipated, at another frequent, but always accompanied by more or less strong and offensive mucus. This form of disorder is so common in the nursery, that I need not dwell upon its description; but may now proceed to the treatment I have generally employed for its removal.

First, as to diet.—Fresh vegetables, pastry, sweets, and salted food should be interdicted; stale wheaten bread with milk should form the evening and morning meal; and the meridian repast should consist of fresh animal food, such as mutton-chop, boiled fowl, or beef-steak, in small quantity, with the treat before mentioned. To this may be added the various animal broths, and a little of the best rice in the way of pudding. It may be, and frequently is objected, that the hitherto indulged child will not take to this diet. My answer is, let the child fast until it will, and the period of abstinence is seldom a very protracted one. In dispensary practice, the cure of verminative disorders is constantly delayed by the parent being unable to afford the appropriate diet for the child; and owing to this common occurrence we are rendered painfully sensible of the great importance attachable to a regulated diet in these cases.

Next as to medicine.—It has been my custom to administer scammony, jalap, and calomel, in small doses (suited to the age), every alternate night, at bed time, succeeded the morning following by a small dose of castor-oil. There are two reasons upon which I think the preference for *small* doses of aperients might be justified: the first is, they have a better opportunity of exercising their alterative effect, by being leisurely passed through the intestines; and the second is, that in the great majority of verminative cases which I have witnessed, the little sufferer is more or less troubled with partial prolapsus of the lower gut; and it is scarcely necessary to add, that powerful purgatives render this local debility a great source of distress. At the same time I concur with my esteemed friend and colleague, Mr. Scott, in thinking that the *first* purgative should be in full dose, as a free evacuation of the large intestines gives marked relief to the accumulative distention and anal bearing down accompanying these cases. Gamboge, from being tasteless, would be a purgative peculiarly adapted for children; but it is a drug which sometimes not merely produces great nausea, but occasionally fails altogether in acting as a purgative: hence I cannot recommend its general adoption. After the first passages have been thus relieved for a week, the spirit of turpentine, mixed with castor-oil, may be given with the most salutary and marked effect; frequently removing hundreds of these enemies of childhood at every dejection. The dose I have generally administered to a child of five years of age has been two drachms of each, taken combined, and on an empty stomach; and, as a little tormina sometimes accompanies the remedy, the mother or nurse is directed to give occasionally a little warm oatmeal gruel, well nutmegged; and if the medicine produce temporary intoxication, (not an unusual effect), to lay the child on its bed till it pass over. Another mode of exhibiting turpentine is in milk, sweetened; and this form will sometimes agree with the child's stomach better than the one just mentioned.

Lime-water has been greatly lauded as a beverage in these cases, and I apprehend with considerable justice, as its certainly beneficial effect may be accounted for, not merely on its aiding the removal of the mucus which is said to form the chosen nidus of these worms, but as correcting acidity, and thus act-

ing medicinally and chemically at the same time. Of course the necessity for repeating and continuing the above medicines can only be determined by the attendant circumstances of individual cases; but even before they are discontinued (and I have generally persevered in their exhibition for a fortnight), there is no objection to the use of some strengthening remedies, with which the cure may generally be completed. For this latter purpose, the infusions of chamomile, gentian, or calumba, with the powders of iron, bark, or rhubarb, will, any of them, answer very well.

The use of cowhage (the dolichos pruriens of Linnæus), has been strongly urged on the profession by several practitioners, more particularly by Drs. Chamberlin and Thomas, the latter of whom affirms, "that in several hundred cases in which he exhibited it in the West Indies, along with the submuriate of mercury and jalap, he never knew it once to fail." Had the latter mentioned remedies not the more important agency in the cure? The cowhage I have used, but not extensively enough to authorize my venturing a decided opinion respecting it; and perhaps it is but just to Drs. Chamberlin and Thomas to add, that in "The Natural History of Guiana," a work replete with information, Dr. Bancroft has recorded sentiments equally favourable to this now little-used medicine.

Of fern-root (the basis of Madame Noufler's celebrated remedy), of valerian, tin-powder, iron-filings, ground-glass, &c., I know little, further than that they have been extensively employed as vermifuges. The latter-mentioned (if administered) must be given in very large doses, as their operation is purely mechanical.

Daily exercise in the open air, and a regulated diet, are assuredly the best means of preventing a recurrence of the complaint under consideration. And one dietetic article I may here with propriety especially allude to, and that is common salt. Although I cannot agree with Dr. Rush in thinking it valuable as a means of *removing* worms, I certainly do esteem it highly as a constituent in a child's food, well calculated to prevent their *regeneration* in the intestines.

The destruction of the third variety of worm to which children are liable—viz. the lumbricus teres, must be conducted on principles similar to those I have just described. Suffice it, therefore, to remark, that the ileum is the favourable habitat of the worm—that perseverance is indispensable for its removal—and that although the least common, it is the most dangerous variety of vermination to which children are exposed, as it oftener leads to convulsions and death than any other. And here I may lay down a practical fact of great importance, that the non-detection in a child's motions of any worm, is not by any means conclusive evidence of the child's being free from them. Therefore, if a young person labour under verminative symptoms, we should continue to exhibit appropriate medicine for some time, although apparently without effect, as it has been well observed by Dr. Armstrong, that worms may be so changed previous to expulsion, as not to be recognizable.

Vermination gives rise to many sympathetic affections—in the brain, in the heart, in the lungs, in the stomach, and in the bladder. An instance of the first of these—viz. a sympathetic affection of the brain—commences this paper; and since the time of its occurrence, I have repeatedly met with similar ones, though none perhaps better marked. It becomes, then, a matter of practical import to ascertain the features by which the young practitioner may be led to suspect at least the existence of vermination, when operating as a cause of disorder; and with that end in view, the following observations, brief though they be, may not altogether prove useless.

If a child who has exhibited a fretful temper, has been irregular in its bowels, has a tumid abdomen, and has been subject to slimy evacuations, should be attacked with cerebral symptoms, they should first be met, almost exclusively, by active purgatives; for with the removal of the cause will the apparently cerebral disorder subside. Again, should a child, so circumstanced, exhibit still stronger symptoms of affection of the brain—as dilated pupil and epileptic paroxysms, without a corresponding affection of the pulse and skin—vermination is probably the source of disturbance.

Should a young person be troubled with pain, sometimes referred to the side, sometimes to the epigastrium, and more frequently to the umbilical region, and be seeking relief for a tickling cough,

unattended with expectoration, though considerable emaciation, anthelmintics will frequently prove the best remedies that can be exhibited, as *this* is but another form of the disorder under consideration.

Irregularities of the vascular system are frequently observed to arise from the presence of worms. Not twelve months ago I was consulted as to the curability of a young lady said to be labouring under an affection of the heart. I found, in the case alluded to, an intermitting pulse, short breathedness, tickling cough, and a countenance certainly not unlike the physiognomical expression of a person labouring under an affection of that vital organ. But on proceeding to an examination of the natural functions, I was led to suspect that they were quite as much concerned as the heart, which might only be suffering sympathetically. The treatment for vermination was adopted, and I had the satisfaction not merely to see great numbers of worms which had been voided, but to witness the young person's rapid restoration to health.

I have known some well-marked instances of gastric uneasiness being solely attributable to the presence of worms, and have been led to think the lumbricus teres the usual cause of uneasiness; as in two children I have witnessed this worm make its exit by the mouth, much to the surprise of the bystanders. The symptoms, in these cases, additional to gastric pain, are those of worms generally, and great nausea more particularly.

The sympathy between the bladder and the alimentary canal is so frequently observed as scarcely to call for remark. When the latter is infested with worms to any great extent, the former is invariably affected. I shall, therefore, on this point, only observe, that the frequent disposition to urinate, and the thick milky state of the water, might probably mislead, or be mistreated by the practitioner who failed to bear in mind the intimate relations existing between the bladder and the intestines.

Having, in the above observations, attempted to describe three varieties of vermination, our *diagnosis* should not be confined to the distinctions between that complaint and others, but should extend to the inquiry—how may we know the particular form before us? In well-marked cases there is little difficulty; as, for instance, if a child, having great anal and nasal pruritus, be free from inordinate appetite, tumid abdomen, or disposition to cachexy, we may feel assured the irritation is purely ascarideal. Again: if a child be cachexial to a great extent—have little of the pruritus just mentioned—have an inordinate liking for improper food and cold water, and be troubled with the before-described symptoms—in such a case, great part of the intestinal tube is doubtless affected with these parasitic animals. Lastly, if a convulsive paroxysm, cerebral disorder, or particular abdominal pain, arise in a healthy-looking child, and be unaccountable except on verminative explanation, the presence of the terctral variety is indicated. Hence our diagnosis as to *form* of disorder, in the majority of cases, approaches to certainty. But it does occasionally happen that the bowels of a child are infested with three, frequently with two, varieties of worm at the same time. In such cases the symptoms are of a mixed character.

In conclusion, very little attention has been paid to the post-mortem appearances in these cases: a lamentable fact, too easily ascertained by reference to the pages of Baillie in past, and Martinet in more recent times. One reason, doubtless, is the comparative infrequency of children dying solely from vermination; but still cases do occasionally present themselves, and should the author of the present contribution ever venture to resume the subject, it will be to direct attention to this much neglected but interesting field for pathological inquiry.

SIR A. COOPER AND MR. GUTHRIE.

THE CASE BRIEFLY STATED.

To the Editor of the Medical Gazette.

Sir,

As I presume the controversy between Messrs. Key and Guthrie has drawn to a close, perhaps some of your readers may not be unwilling to get at the chief point in dispute, which, as regards the views of Sir A. Cooper and Mr. Guthrie, appears simply to be—what are the precise boundaries of the spermatic cord in-

mediately on its entrance from the abdomen into the inguinal canal.

Mr. Guthrie conceives that the description formerly given of the relation of the lower margin of the transversalis muscle to the cord, is "in many instances an incorrect description." His observations lead him to describe four varieties in the relations of these parts. In the first (which he takes to himself as a discovery—nor does it appear that he may not justly lay claim to it), the cord passes through a slit-like opening, in the lower margin of the fleshy portion of the transversalis muscle, so that there is muscular fibre above and below, or anterior and posterior to the cord; and similarly related to the hernia when it is of the oblique species. In the second, the opening or slit is bounded below by tendinous fibres, the muscular fibres not extending so far inward as the point at which the cord enters the inguinal canal. In both these varieties, it is evident that the slightest muscular contraction of the lower fibres of the transversalis muscle will have a direct influence on the upper extremity of the inguinal canal; in the healthy state this disposition will have a salutary tendency; in the morbid it will tend to compress the hernia; and produce strangulation should the contraction of the muscle be spasmodic.

Mr. Guthrie's third variety is where the fibres of the transversalis pass horizontally inwards, and after contributing to form the lower part of the sheath of the rectus, send down a tendon almost in a perpendicular direction, to be inserted into the spine, or tuberosity of the pubes.

The fourth variety described by Mr. Guthrie precisely corresponds with that which Sir A. Cooper seems to regard as the normal condition of the parts—viz. when the tendon of the transversalis muscle passes in conjunction with that of the obliquus internus to form the antero-inferior portion of the sheath of the rectus, and then curves downwards and outwards to be inserted into Gimbernat's ligament, and into the internal portion (for a variable extent) of Poupart's ligament, thus contributing to strengthen the posterior wall of the inguinal canal, immediately behind the external ring. Mr. Guthrie thus confirms Sir Astley's description in the fullest manner; and the great difference which a careful comparison of the writings of these two surgeons makes apparent between them, is, that while the latter describes the variety just alluded to as the constant state of the parts, the former has alluded to three other conditions, the relative frequency of which it is not easy to collect from his essay.

Both writers maintain that the internal ring is muscular; the one by an orbicular arrangement of the muscular fibres; the other by an anterior and posterior, or (according to his own nomenclature), superior and inferior bundle of muscular and tendinous fibres, with separate and distinct attachments. But there is a case, according to Mr. Guthrie, in which this ring is not muscular; and that is, where the conformation of the parts is according to the third variety, which, judging from the statements of the French anatomists, and also from personal observation, we are led to infer is by no means unfrequent in occurrence.

It is much to be regretted that Mr. Guthrie has not stated in what number of dissections he observed the conformation described in his first variety; for although it must be allowed to be of decided practical utility to know that such a state of parts *may* exist, and that a hernia *may* be exposed to the effects of a spasmodic muscular contraction, still a much more satisfactory case might be made out were there data sufficient to authorize a conclusion as to the relative frequency of such a condition.

From the above statement it may be clearly inferred, that Mr. Guthrie has merely added, to the generally-received description of the boundaries of the inguinal canal, an observation peculiar to himself, which fully establishes the fact that the internal ring, or the parts escaping through it, may be directly influenced by muscular spasm. Had Mr. Guthrie stated the result of his labours, without appearing to impugn the accuracy of his predecessors or contemporaries, the value of his essay would have been more fully appreciated.

Surgical anatomy is to be regarded as a congeries of facts, bearing upon operative or medical surgery; and in proportion as this collection increases in accuracy and number will the certainty of practical surgery be augmented. It appears to me, sir, that Mr. Guthrie has presented his views of the anatomy of the inguinal canal in an interesting and practical manner; and although I am by no means disposed to give Mr. Guth-

rie the credit for originality which he is evidently willing to take, it is my opinion that the profession in general are indebted to him for his remarks; but more particularly those who, like myself, are engaged in directing the anatomical pursuits of some of the rising generation of operating surgeons.

I am, sir, your obedient servant,

A Lecturer on Anatomy.

Nov. 24, 1833.

COLLEGE OF PHYSICIANS—A REPLY.

To the Editor of the Medical Gazette.

Sir,

In the letter which you did me the honour to insert a short time ago in the Medical Gazette, I forebore to notice one part of the subject to which it related, not through inadvertence, but because I thought that the arguments adduced were sufficient to prove to candid minds, that the Fellows of the College of Physicians do not deserve the hard names which have been imposed upon them—that they are not exclusive monopolists, actuated by selfish and unworthy motives. From the partial manner, however, in which some persons continue to reason upon this subject, it seems not unnecessary to make some additions to my former statements. I contended before for the justice and policy of affording some advantage to those medical students, whose education had been of the highest order. It should have been stated, that graduates of Oxford and Cambridge are rendered admissible at once to examination for the Fellowship of the College of Physicians, not solely on account of the extended course of intellectual cultivation which they have undergone, but also on account of the moral probation through which they must have passed. It ought not to be forgotten that the constitution of those Universities is such, that all who enter them become members both of the academical body and of some smaller society, which enforces its own regulations under its own superintending officers. The students, therefore, are amenable, in the first place, to University discipline, which is aided by an extension of the authority of those Universities over the towns in which they are situate; and they are subjected likewise to the closer observation and more immediate control of the governors of their respective Colleges. It is this constitution of the English Universities which renders them more efficacious than others, if not in imparting knowledge, at least in forming the character of their students. It enables them to maintain a stricter discipline than can possibly be enforced at other Universities differently constituted—an effect which intelligent foreigners have not been slow to observe and to acknowledge. And it stamps a moral value upon their degrees, higher than belongs to any degree conferred in a metropolis: for until the general character of society shall be improved, education in a metropolis, whatever may be its scientific and professional advantages, must be allowed to labour under a moral disadvantage.

It has, I am aware, been asserted, either ignorantly or maliciously, at all events most falsely, that Oxford and Cambridge are schools of extravagance and immorality. The falsehood, however, of such an assertion, has been admitted, even by those who are by no means well disposed towards those establishments. It is not to be supposed, where large numbers of young men are collected together, many of whom have been nursed in luxury and indulgence, that the excesses of the hot-blooded can always be restrained, or the extravagance of the wealthy in all things curtailed. But these out-breakings constitute the exception, not the rule: they are noisy and obtrusive in their nature, and therefore attract more attention than the sober demeanor and regular habits of the great body of students. In fact, at English colleges such restraints are imposed upon irregularities, and such difficulties opposed in the path to vice, that it is far more easy for the virtuously disposed to continue virtuous there, than perhaps in any situation except the bosom of a private family. Meanwhile, the lessons which are daily heard are those of religion and morality; the principles imbibed are those of honour; and the feelings acquired are those of gentlemen. If tares spring up in such a field, they are not its natural growth or principal produce. Although the English Universities may not be perfectly weeded from vice, they are far indeed from being nurseries or schools of vice of any description.

Of old the College of Physicians was careful to look to the character of those whom it admitted to the Fellowship. Hence every candidate was required to call personally upon the Fellows, in order that each Fellow—not those alone who had examined the candidate—might exercise his individual judgment as to the propriety of admitting him. In its excellent Statutes de Conversatione Morali, the College has embodied its ideas of the moral character of a physician; but what security does many a piece of parchment that confers the title of Doctor afford that its possessor will realize such a character?—that he will not in his future intercourse with the world, and with his professional brethren, be lured by interest from the path of rectitude and honour?

The author of the Reply to my former observations, calls upon the Fellows to "receive into their body every physician whose competence to *practise* has been proved *by an adequate examination.*" But no examination is adequate to all the purposes required. Examinations alone are very imperfect tests even of general and professional knowledge; of moral character they can be no test at all. A plausible examination may be passed by a candidate whose knowledge, the mere effect of training, will soon again decline from its forced condition. It is necessary, therefore, to know in what time and manner it has been obtained. And if the present diffusion of education and intelligence, and the demands of an increased population, require, what I would not deny, that a wider avenue should be opened to the Fellowship, it will still be right that a longer probation should be required from some physicians than from others.

The author of the "Reply" would have "no distinctions among physicians except such as arise from their age, experience, and general character, in the profession." But how can the character of candidates be estimated at the time of their applying for examination and for their license, except from the nature of their previous education? At a later period, indeed, their character may be estimated by the profession, and by the public; and for a character thus made known, provision has been made under the present system. The most distinguished among the licentiates have in this manner, during the last ten years, been admitted to the fellowship.

The author of the "Reply" appears to complain, that licentiates admitted to the fellowship should, after examination, be subjected to a ballot. But this is no peculiarity in their case. Every fellow has, in like manner, a voice as to the admission of every candidate. And it is right that it should be so; for one of the most important functions of a member of a corporate body, which he is bound to discharge with integrity and impartiality, is, to provide aright for the succession of others into that body.

I am asked, "whether the lapse of twenty years has made any alteration in the views of the College on the subject of access to their Library?" a question to which I would willingly reply "with candour," if my knowledge enabled me to do so. I can but state my own belief upon the subject. In former years, when the licentiates attempted to gain possession of the College by force, I can readily believe that a desire was entertained to exclude them from the library. But I am confident that no such desire exists at present; on the contrary, that the very opposite wish is strongly felt. But difficulties arise from the deficiencies of the present library, and from the want of means to extend its utility. The College has no collection of modern, or even of generally useful, works: it has no room for the admission of readers, but that which is wanted for the meetings of the College; nor could it well afford any new expense for the safe circulation of books, as the statement recently published of its accounts may sufficiently testify. The books which the College possesses were left to the Fellows—for their sole use; and they are bound to transmit them uninjured to their successors. They consist, in great part, of works which are only occasionally consulted; and they may be consulted on application to any one of the Fellows: each Fellow being thus made, as it were, an unpaid librarian.

I was induced, sir, to trouble you with my former letter by the desire of explaining some circumstances which had been misrepresented. I trouble you again for the sake of supplying an omission in that letter. But I have no design of entering into a controversy, and can therefore promise you that I shall not trouble you again upon the same subjects.

Your obedient servant,

A Fellow of the College of Physicians.

November 19, 1833.

MEDICAL GAZETTE.

Saturday, November 30, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

JEALOUSY BETWEEN PHYSICIANS AND GENERAL PRACTITIONERS.

It is lamentable to observe the disunited state of the medical profession in England, and the evils to which this gives rise, in the violence of party spirit and jealousy, if not hatred, with which those belonging to different departments regard each other. A striking illustration of this is afforded by the circumstance, that one of the great ends at which the most violent of the professed reformers at present aim, is the entire destruction of all the existing divisions in the profession. Science, we are told, admits of no grades; what knowledge is required to fit a man to practise, let that be exacted; and being so, let all stand on the same level, whether one year or ten may have been spent in its acquirement. In short, it is assumed that a certain quantum of information is necessary to constitute a medical practitioner; and that this having been acquired, all divisions into grades are not only unnecessary, but prejudicial. If we were to take our opinions merely from what appears in the radical press, or from the unanimity with which resolutions are passed at some of our societies, we should be inclined to imagine that the profession, almost without a dissentient voice, concurred in these sentiments. But there are two reasons against so hasty a decision: first, that only one side of such questions is ever entertained by the class of persons who contribute to the radical journals, or would be suffered to appear in their pages, were it otherwise; secondly, that the debating medical societies in London represent only one portion of the medical profession; and, in relation to the supporters of rational reform, run the hazard of placing themselves too much in the position which the trades' unions, and combinations against taxes, occupy with regard to those in general politics, who, while they correct abuses, in doing so would still wish to avoid revolution and anarchy. But such parties, though always the most noisy, are by no means always the most influential; and no small portion of the bitterness recently displayed in certain quarters, seems to spring from various indications afforded by the government, of their disinclination to adopt the levelling system; and that, though quite alive to the manifold corruptions in our medical corporations, they are not so well convinced that the principle of such establishments is bad, though their arrangements be defective; or that the advancement of medicine and surgery would be promoted by suffering them to merge in the Medico-Chirurgico-Apothecarium of Wellington-street.

One of the resolutions to be moved at the Westminster Society is, that there shall be but one "Faculty." Now, if by this it be meant indirectly to countenance the proposal that there should be one common temple, in which medical science is to be worshipped as "one and indivisible," without any of those grades which at present exist, we are quite satisfied that if such a Utopian scheme were attempted, the fabric to which it gave rise would be of very short duration. But if it be intended to express the urgent necessity for the palpable jealousy and jarring interests of our present Colleges being removed, by establishing some common bond and unity of purpose between them, —then do we most fully concur in the sentiment. It sounds plausibly to have this end attained by uniting all the departments of medicine under one head; but unless not only all the existing institutions were annihilated, but all the feel-

ings, prejudices, and conventional arrangements of society were to be uprooted, its accomplishment, in more than the mere name, would be a task of Herculean difficulty. We are no advocates for any system of exclusion, but we are much in favour of ranks or gradations—open to all, indeed, but accessible only through extended cultivation and study, proved by superior knowledge and acquirements. They who set their faces against the existence of grades are chiefly the general practitioners: the truth may be unpalatable to them, but it is the truth notwithstanding; and their opposition originates in an expectation that, if all distinctions were abolished, they would be freed from the assumption of a superiority, which is too often haughtily maintained by the physician, and frequently without any thing but the diploma to back it. Much of this feeling has been caused by the profusion of Edinburgh Graduates, who, since the peace, have settled in England, and coming into competition with the Licentiates of the Society of Apothecaries, have claimed precedence on the strength of the Doctorate, while they have often had nothing, in age or acquirement, to justify their pretensions. The physician, instead of being the coadjutor and referee of the apothecary, on whom, as of yore, he was glad to fall back in time of need, has become too much his rival.

Now, on the establishment of grades, and commencing with that of the physician, as the one chiefly aimed at by these declaimers, we should render the station open, it is true, to all,—but of such steep and laborious ascent, as should both limit the number who attained it, and secure that respect from its eminence which at present is claimed, and often claimed in vain, for a mere name.

If we were concerned in the reorganization of a College of Physicians, we should certainly not acknowledge every man as entitled to admission because he possessed a medical degree, unless the terms of granting such diplomas were very much altered; nor should we systematically admit or exclude any man merely on account of the place at which he had studied. Neither do we think that admission as a member of the College, ought to carry with it a place in the governing body. No establishment ever was, or ever will be, well regulated, unless the management rest with a limited number of its members. The evil in our present Colleges is not that the government is taken out of the hands of the members at large, but that it is placed in the hands of those who are *self-elected* and *irresponsible*. We have over and over again pointed to this as the greatest of all abuses which can exist in any body of men entrusted with controlling and directing the affairs of others. Referring still to the College of Physicians, we would limit the number of those entrusted with its government; in this respect assimilating it to the College of Surgeons; but we would have them elected and responsible: and in this respect, how unlike the sister College!

The term *Licentiate* ought to be abolished, as unnecessary, and one now associated with the idea of degradation. All who possess such education and attainments as to entitle them to be admitted into the College, ought to bear the same name—either that of "Member" or "Fellow." Those who do not come up to the required standard, ought not to be "licensed" at all. Indeed, if this were conceded, we should not object to any *reasonable* advantage being given, in an English College of Physicians, to the Graduates of English Universities.

By this or some analogous step, the character of the Doctorate would be raised, the number practising in this department diminished, and much of

the jealousy which now subsists between the physician and general practitioner would be removed. Our space prevents us from proceeding further with this subject at present, but we shall return to it on a future occasion.

OUR GERMAN CONTEMPORARIES.

We are indebted to the *Gazette Médicale* of Paris for an interesting article, contributed by Dr. Kühn, of Leipsig, giving an account of the principal medical periodicals of Germany. The division of labour in that part of the Continent is certainly carried to a surprising extent. Some of the German journals, it is true, are devoted to medicine generally; but the great majority of them are specially consecrated to particular branches of medical science; some of them are journals for surgery, and others for some one branch of the surgical art; then there are obstetrical journals, journals for legal medicine, for mental diseases, for anatomy and physiology, for pharmacy—and a large number are wholly occupied with medical literature, or analyses of new works, and the contents of other periodicals, foreign and domestic. We do not intend even to enumerate all their names; but we shall mention a few of them that are most distinguished, and which have obtained the highest reputation. Hufeland's journal, *Journal der practischen Heilkunde*, which comes out monthly at Berlin, holds decidedly the first place, both in point of seniority and real value; it is edited by the venerable Hufeland, and his son-in-law Osann. Professor Rust's *Magazin für die gesammte Heilkunde* comes next in point of importance; it is also published in Berlin, and has already reached its fortieth volume, though it does not appear regularly. The *Archiv für medicinische Erfahrung, &c.* is another Berlin journal of high character; it is conducted by Professors Horn, Wagner, and Nasse, and is published every second month.

But besides these there are three other periodicals which appear *weekly* at Berlin: the *Wockenschrift für die gesammte Heilkunde*, which is *Casper's Kritisches Repertorium* in a new shape, and the two Medical Gazettes,—the *Medicinische Zeitung*, edited by the learned Hecker; and the *Berliner Medicinische Zeitung*, by Dr. Sacks. By the way, we may mention with some little share of pride that the "Medical Gazette" has latterly become a favorite title among the German periodicals: it is borne by several of them, though none that are so called—any more than the *Gazette Médicale* of Paris—can boast an equal standing with ourselves: they are all junior to us of the London Medical Gazette; and, it is not unreasonable to believe, are indebted to us for the name.

There are two German journals devoted to Legal medicine, both appearing quarterly: the one, *Zeitschrift für die Staatsarzeneikunde*, is edited by Henke of Erlangen, and has been established for these thirteen years; the other is comparatively recent, the *Magazin für die gerichtliche Arzeneiwissenschaft*, is published at Berlin, and edited by Dr. Wildburg. Both these journals are distinguished for their excellence, and are highly esteemed throughout Germany.

Professor Friedrich, of Würzburg, has been editing a journal for some years on Mental diseases and Psychological medicine. On Anatomy and Physiology there are several periodicals, among which we may mention Meckel's *Archiv für A. und P.*, published at Leipsig; and Tiedemann and Treviranus's *Zeitschrift für Physiologie*, which comes out at Heidelberg.

We have not room to notice the periodicals on the Diseases of the Eye and on Pharmacy; nor in the department of Medical literature can we do more than name the excellent *Bibliothek* of Hüfeland—the *Litterarische Annalen* of Hecker—the *Medicinische Zeitung der Auslandes* (the Foreign Medical Gazette) of Dr. Kalisch, of Berlin—and Pierer's *Allgemeine Medicinische Zeitung;* while we are obliged to omit a host of others. But the preceding notes may serve to give our readers some little idea of the industry and zeal of our German brethren.

CLINICAL LECTURE

UPON

ANEURISM AND THE TYING OF ARTERIES;

Delivered at the Middlesex Hospital,

By Sir Charles Bell.

Gentlemen,—We have fallen into arrear on the occurrences which illustrate the im-

portant subject of aneurism and the tying of arteries. Some circumstances I must endeavour to recall to your recollection; but something is still present to your observation in the hospital.

It is proper that you take up this subject historically, by which two objects will be attained: you will be doing a duty to your profession, by honouring those to whom you are infinitely obliged—I mean the authors who, by their labours, have brought this department of practice to such simplicity, that you have only to apply the rule: whilst, at the same time, you will be taking the most direct means of acquiring a knowledge of the principles which have guided them.

It seems to be an unaccountable thing that the tying of an artery should fail so often in the cure of aneurism, and almost never in an amputation. You never see the artery burst out in amputation, unless by suppuration and ulceration of the stump, and then you perceive the cause of it. Why should not the operation be equally secure in aneurism? There is the first point for your consideration. I do not know a more important one, or one that has been more neglected than this. The fact is, then, that there is a relation established between the constitution of the limb, and the condition of the artery that supplies it. There is ever this connexion between the part to which the artery is going, and the artery itself. How else can you account for the throbbing of the artery in inflammation of the hand? You have just seen along with me a case of inflammation of the hand, and the artery is beating at the wrist far more powerfully in the affected arm than in the other, so that it is evident that the condition of the hand is influencing the artery. When you take off a limb and tie the artery, you perceive the artery beating against the ligature; but even before the stump is dressed that action has somewhat subsided, because with the removal of the limb you take away the natural source of excitement to the vessel. If, instead of the limb being taken away, it remains, there is the relationship between the limb and the artery when tied as before, and the artery is still excited to action. Here is one reason why there is more difficulty in restraining the blood by tying a vessel above an aneurism, than when the artery is tied in amputation.

Coming now to speak of the importance of inosculations, I feel the necessity of your studying the proper authorities in your profession. Indeed, you may judge of the intentions of your teacher by the works which he desires to see in your hands. If he recommend some meagre translation of a foreign work as your text-book, he means to make his own task easy. If there be a science peculiar to this country, and taught in a superior manner, it is surgical anatomy, or the principles and practice of surgery. In respect to this part of surgery, which relates to aneurism and the tying of arteries—it is English—I advise you to study the writings of John Hunter, and of my brother, John Bell; they are the works of men of genius, and as such contain the principles which are of the utmost consequence to us as surgeons. They are very different in composition; whilst both contain many excellencies, both may propagate errors, if particular expressions be extracted as practical rules; they require a commentator, to be safely studied. More especially on the subject of inosculation I would advise you to read my brother's original works; and in order to do justice to the subject and to the author, look back to the circumstances in which his treatise was written. Place yourselves in the condition of a person educated, as you may suppose him to have been, who had before him the systematic works upon surgery which were then the authorities, and ask yourselves with what anxiety you would have inquired into the subject. Reflect with what ingenuity my brother has investigated all the facts that throw light on this subject; how well he has reasoned the matter; and the important conclusions to which he has come; for example, that there is not an artery of the body, in the groin, in the axilla, or even the aorta itself, which you may not tie, with the certainty of the inosculating vessels carrying on the circulation; and that you will observe, not by a gradual preparation which enlarges the collateral vessels, an idea entertained by some, but by the inosculating arteries being always sufficient for the circulation of the limb, however abruptly the trunk is tied. True, all this reasoning is now rendered unnecessary; but if you are not satisfied with knowing the mere rule of practice, the mere aphorism, and wish to comprehend the thing fully, then you will consult such works as I have recommended; you will see how gradually, how tremblingly slow withal, and with what frequent relapses into error, men's minds were eventually enlightened on this subject. By this agreeable mode of study you will better comprehend the theory, and value the rule; and you will learn how the profession has been raised by the successive labours of ingenious men, and by none so much as by Mr. Hunter.

Well, then, you know that the great arteries have been tied; you know well that my excellent and respected friend, Sir A. Cooper, has tied the aorta itself, and that the fact is acknowledged on all hands that the inosculations every where are sufficient

to carry on the circulation. But are there no circumstances in which the inosculation cannot carry on the circulation? Now I beg your attention to what John Hunter has done on this subject. You know very well that he invented the operation of tying the femoral artery for popliteal aneurism. There never was a greater misfortune to the profession, than that the ideas of John Hunter should be supposed to be fully and adequately communicated to the profession through those whom he left behind him. Accordingly, you will find it said that John Hunter operated on the fore part of the thigh, that he might tie the artery where it was sound. Every one who has attended a season in a dissecting-room knows full well, that when aneurism takes place in consequence of disease of the artery, there is no security that the artery is less diseased near the heart; on the contrary, the ossification, or disease of the coats, which precedes the aneurism, is more distinctly observable the nearer the artery is to the heart. This was not the reason of Mr. Hunter's operating on the fore part of the thigh; the reason was, that he might tie the artery remote from the *disease*—that is, the *aneurismal tumor;* because he observed, and you may observe in practice, that if the incision be made so near the aneurism that the inflammation from the incision, and the suppuration necessarily following, shall implicate, or connect itself with, the aneurism, then you have the whole limb in a state of inflammation with suppuration; but if you go higher up, and if you make a neat small incision upon the artery, if you do not disturb the parts, if you do not finger them too much, but neatly take up the artery, and put a single ligature upon it, then there is no inflammatory action produced on the aneurism, no inflammation or no abscess takes place in the limb, and then, and then only, are the collateral vessels sufficient for their office. But if, instead of this quiescent and uninflamed condition of the limb, you have inflammation and effusion, attended with suppuration, all the collateral vessels are choked and stopped in their action, then you have mortification of the toes; and it is supposed that this mortification is the effect of tying the trunk. No, it is not; it is the effect of the compression of the collateral vessels. I believe this is pretty obvious now to every surgeon (it has always been obvious to me), but it is a thing that has not been so early noticed, in consequence of this wrong interpretation and comment on Mr. Hunter's improvement—that he performed the operation high up, not for the purpose of tying the artery remote from the aneurism, but to get at a part of the vessel freer from disease. See what mischief is done, when a man, not intended by nature to comprehend the genius of Mr. Hunter, is permitted to be the interpreter of his works.

Formation of Aneurism.

The first thing that I must ask you to notice, is the difference between an aneurismal artery and an aneurism. An aneurismal artery is a dilated artery, which has no clot in it; whereas an aneurism always has a clot in it. This is not a distinction without a due difference. The aneurismal artery is an enlarged artery; but let me state what takes place previously to the dilatation. There is a disease of the coats; they become thickened; they lose their elasticity; they give an inert resistance to the heart's action; and at last a fluid appears between the laminæ, or coats of the artery, which hardens into a concretion, and becomes what you call an *ossified* artery. An artery in its natural condition is elastic and limber, and the elastic power is the only kind of force that can resist the continual action of the heart. You know very well that the action of the heart causes an impulse that will quickly destroy the firmest textures—the sternum, for example, or the vertebræ; the blood will very quickly make its way into the spinal column itself; nothing solid, no inert resistance, will withstand the heart's action; nothing but the elasticity of the coats of the artery is equal to oppose the pulsation of the heart; and consequently, when the coats of the vessel cease to be elastic, they begin to dilate under the expansive force. But the dilated artery is not an aneurism, for it has no clot in it. Why has it no clot? Because there is a relation established in the natural condition of the system between the inner coat of the artery and the blood. As long as the inner coat of the vessel is entire, and possesses its natural endowment, no coagulum will form upon it; but if you hurt it, if you deprive it of its appropriate quality of life, if you break the surface, or injure it in any manner, presently a little clot of blood forms on the injured part. Thus it happens that, after the artery is dilated to a certain extent, the inner coat cracks; on this chasm the blood immediately coagulates; and now the true aneurism is forming—by the further yielding of the coats, and the dilatation of the cellular texture of the artery. Happily, the moment that the coats give way a coagulum forms, and the blood so coagulated is deposited in a succession of layers. Without this accretion of coagulated blood, and without these successive layers, you would not have a true, but a diffused aneurism. Here [presenting it] is a sketch, shewing you that the true aneurism consists of condensed cellular membrane which was around the vessel, but is now around the tumor, and that there are many strata, as it were, of coagu-

lated blood. It is the mass of coagulated blood, firmly impacted in layers against the walls of the aneurism, that sustains for a time the heart's action; but at length it gives way. If the rupture be sudden and large, the coagulum is not sufficient to sustain the pressure; the fluid blood bursts out, and the *aneurism is diffused.*

Plan of a section of the aneurism.—*a a*, the artery —*b*, the cavity of the aneurism—*c*, the irregular and imperfect coat of the seconday aneurism—*d* points towards the clots of the true aneurism.

I know not if the profession admit the term *secondary aneurism;* however that may be, it is important, as you will presently see, to mark the circumstance. It happens thus: from the coagulum of blood in the first tumor giving way, and the cellular membrane also yielding, the blood escapes anew into the cellular tissue of the limb; thus a secondary sac, or a sac external to the first, is formed of squeezed coagulum and condensed cellular substance, as I have there represented with my pen.

The patient to whom I have more particularly to call your attention, was admitted into the house on my week, and he lay under my name; but he came in with a recommendation to my colleague, and the consequence of this has been delay. You, who are naturally desirous of seeing operations, may think that we sometimes delay too long in operating—that is, when a stone case comes in, I wish to delay it: in a case of cancer, perhaps, I wish to delay it; but you never found me delay a case of hernia, or of aneurism. In this case, finding nothing done, I urged immediate attention to the man; I stated that he should be bled largely, kept low, and that the surgeon to whom he was recommended should be immediately informed of it, otherwise disastrous circumstances might occur. They did occur; for he came in with a small hard tumor in the middle of the thigh, and one morning, shortly after, you saw a new tumor arising—a tumor occupying a great part of the thigh; the next day increasing, and coming up to the groin. Now that is the circumstance which I wish you to notice under the head of a secondary sac: where the first-formed sac bursts under the action of the heart, and a secondary irregular tumor forms. This is a disastrous circumstance: it is the forerunner of disappointment to the surgeon, and of the loss of life.

I have just said, if there be a small tumor, and a neatly-performed operation, there is but little re-action in the limb, and all goes on well; but if there be a large tumor, and the blood not contained in a regular sac, but diffused, there is more reaction, more excitement of the vessels of the limb; and, as I stated before, this is the forerunner of the worst symptoms. This case is not new to me in this hospital: I remember a man being brought in under my late colleague Mr. Joberns, in which there was a small pulsating tumor in the groin. We all agreed that the operation should not be delayed; but the man was in a state of great agitation: (in truth, he was conscious of undivulged crime, as we afterwards learned). On this account the operation was delayed. The consequence was, that the tumor enlarged rapidly to the size of a child's head, a secondary aneurism forming over the first.

This patient, then, submitted to the operation, and I dare say you saw the appearance of the limb: it was such as indicated to me that the operation was not likely to be successful. The external iliac artery was tied. It burst out on the seventh day, and then the common iliac was tied. All was done carefully and dexterously by Mr. Mayo. But these cases are most of all unfavourable: I mean those where it is necessary to break up the wound, to dissect again for the artery, and take it up in a higher situation. They do not succeed. Why? For the same reason that I have given you: there is too much injury to the parts, too much excitement, too much inflammatory action raised; all of which tend to destroy the hopes of the surgeon.

I proceed to mention to you the mode of operating in this kind of aneurism, not with reference to the present case, but generally with reference to the common operation. A question was agitated amongst us about the propriety of tying the artery below Poupart's ligament: that question has been already considered and decided

upon; and here you see the necessity of our taking up the subject historically. Mr. Cline, junior, thought that he improved upon the suggestion of Mr. Abernethy, by operating below instead of above the ligament. He was wrong here, and his success was correspondent to his error of judgment. Why did Mr. Abernethy propose to operate above Poupart's ligament? First, in a just and sensible imitation of Mr. Hunter, that his incision might be removed from the diseased parts, so as to avoid inflammation of the aneurism; and secondly, on the principle of tying the artery where there is a great length of vessel, without its giving off a branch. We find, by sad experience, that if the artery be tied immediately below a branch, the blood comes down direct to the ligature—no clot is formed behind the ligature—there is nothing soft to receive the impulse of the heart, or to check its action, and the continual pulsation of the coats of the vessel against the ligature causes these coats to ulcerate; but where you have a large space without a vessel being given off, a large clot is formed to receive the impulse, and in a manner to protect the artery from the beating of its coats against the ligature. You know that when you operate above the epigastric artery, you have the length of your finger, nay more of the artery, without its giving off a branch; and therefore you have a large space in which the blood remains, as in a *cul de sac*, in which it coagulates; and the length of the coagulum thus formed is the security against hæmorrhage. Therefore we put aside the question at once, of operating below Poupart's ligament.

The next thing that you are to attend to in this operation is the place and form of the incision. You saw it made in the line of the external iliac artery, as if the surgeon were about to cut into the abdomen. But that is not the object: he cuts through the integuments — he cuts through the external oblique—he cuts through a little of the lower edge of the internal oblique and transversalis—he then pushes the muscles up, and pushes back the peritoneum. There he feels the artery beating. Now if, in this stage of the operation, you seek to pass the needle around the artery, which seems so distinct under your finger, you will be disappointed, and may do harm; for you must recollect that the artery lies under a fascia, and that no effort which you can with proper precaution make to pass your needle, will succeed. You will therefore proceed carefully, and do not fear to take full time to penetrate the fascia. It is not the just object of criticism that due time is taken on such an occasion as this, since delay can arise only from a proper anxiety on the part of the surgeon. I dislike all haste—I dislike, as I said before, all over-boldness. Now the fascia above the artery is scratched, and at length opened; and when you have got the point of a probe or of an aneurismal needle through it, it passes with ease around the artery; because you know that immedirtely around the artery the cellular membrane is loose. You pass down the blunt needle on the outside, because you are not afraid of injuring the nerve, and bring it up cautiously on the inside; and while doing this you are very careful of the great vein, because here the wound of the vein is as dangerous as the wound of the artery: there being no valve above this, there is nothing to prevent the whole blood of the superior part of the body flowing from such a wound.

It is very important that the artery be surrounded with the ligature, without separating it too much from its connexions. To enable you to accomplish this, you must remember not to keep the patient stretched over the edge of the table; for if he be so stretched, the artery is tense: but you bend the body forward, and make an assistant raise the limb, and then you can take the artery between your finger and thumb, and positively bring it into view. This you may try in the dissecting-room on a dead body. You will find that you can raise the artery, and bring it, between the thumb and finger, out from the vein.

Mode of tying the artery.—But here I must make a remark on the mode of tying arteries; which is a very important subject. When the artery gives way, it is necessary that we scrutinize and endeavour to discover if there be not some method of operating which will ensure the success of the operation. I have nothing new to say on this point, nor have I had for many a long year; because I was educated in the principles which I have since learned experimentally to be correct. There has been much said about broad ligatures and round ligatures. You saw that the round silk ligature was used in this case; and I must also notice that it is the mode of my colleague to draw the ligature very tight around the artery. In amputation I care not about it, because any thing will do to stop the artery, when the limb is away; but where the limb remains, as in aneurism or wounded artery, there is a continual excitement of the artery, and, moreover, the artery being diseased before the aneurism forms, we have in such a case to attend solicitously to every circumstance. Why have surgeons, then, recommended the small round ligature? It is recommended upon the strength of the facts announced by Dr. Jones, in his Treatise on Hæmorrhage. If you tie such a ligature

around an artery, and draw it firmly, and if you then take it off, and dissect out the parts, you will find that the internal coats are broken: this is the fact, as all anatomists have known. It is the reasoning upon it to which I object. They say that it is necessary, for the security of the artery, that its inner surface should be brought into the state of an incised wound. A false theory, sooner or later, is sure to be followed by an unhappy practice; and when I saw it taking hold of the mind of the profession, I said to the pupils of that day that there was no necessity for this cutting of the coats by the ligature. I put a large and soft ligature round the carotid of a sow, and though the ligature was never drawn, and never mechanically interrupted the blood, yet the clot formed, and final obstruction of the tube took place. The experiment was repeated on an ass; this was done to shew that the mere contact of the ligature inflamed the vessel, injured it in the manner I have already hinted at, and caused a coagulum to form in the inside of it. I did not, by this experiment, mean to recommend a new mode of applying a ligature, but only to correct an idea that I saw gaining ground, and which I was confident was an unhappy one. Surgeons were cutting through the coats of the artery, to secure the patient against secondary hæmorrhage.

You are now studying in the dissecting-room: I have been there from sixteen years of age, dissecting and preparing for lecturing. Do not I well remember, that if I tied the tube too firmly in the artery, for injecting the lower extremity—for example, the iliac vessel—when I drove the injection, it burst out at that place? Do not I well remember, that if I were injecting one limb, and wished to prevent the wax going to the other, and if I tied the artery too firmly, when I threw the injection from the syringe the vessel burst where it was tied? Thus, then, by tying the artery in such a manner as to cut the coats, what you term *extravasation* takes place when you inject it; and the familiar occurrence in the dissecting-room may throw some light on the subject of secondary hæmorrhage. In short, I conceive that in tying such an artery as the external iliac, you should take a ligature of five threads, and should tie it so as to present as soft and flat a surface as possible to the vessel; and you should not draw it so tightly as to cut deep into the coats of the artery. That is my recommendation to you: but it is my duty to tell you that many surgeons think differently.

Tying the Carotid.—In connexion with this subject, you have a case where the carotid artery was tied. This leads us to reflect upon the difference of the effect of tying the main vessel of a limb and the carotid. The carotid artery was here tied on account of the tumor termed *nævus*. You have seen this disease in its different stages, during the short part of the season that is past. It occurred, in one case, in the neck of a child, and you saw how the assistant-surgeon operated on it, by passing the long hare-lip pins under it, and surrounding its base with a ligature. This is better than cutting out the diseased part with a knife in such cases. To have cut this tumor from the side of the throat would have been attended with great hæmorrhage. Besides, by the mode which you have seen, more inflammation is produced, and more compression at the same time; whereby there is a greater probability of destroying the root of the tumor by condensation. This has the further recommendation of being Mr. Brodie's practice.

This is the disease which, in its aggravated form, is the aneurism by anastomosis of Mr. John Bell. The second case is of that kind. You find a child with a soft woolly tumor, having a red spot on its most prominent part: this tumor is before the ear, behind the angle of the jaw, and extending to the cheek—that is to say, it is so entirely incorporated with bone, blood-vessels, and nerves, that you can neither operate with the knife nor include it in ligatures. For this disease, the carotid is tied.

But before I speak of the propriety of that operation, I shall endeavour to answer the question that has been put to me—viz. what is it that is so formidable in this apparently simple tumor? This tumor very often appears as a stain or coloured spot on the skin at birth, and gradually it assumes the size and character which you have seen,—an irregular soft swelling, of a bluish colour, from which you can squeeze the blood as from a set of cells or vessels. You have observed the mulberry-like projection on the surface: it is through it that it bleeds; for that soft and vascular projection not only bleeds when touched, but often bleeds profusely and periodically. This tumor, troublesome and dangerous when thus making its progress to the skin, is doubly so when it makes its way inward. Thus I have known it on the cheek make progress to the cavity of the nose, and, incorporating with the Schneiderian membrane, bleed till the patient was blanched like wax.

Now, with respect to the propriety of tying the carotid artery for such a tumor.

[At this part of the lecture, one of the surgeons requested Sir Charles Bell's opinion on a case of strangulated hernia, and the pupils went to the operating theatre. The lecturer promised to resume the subject at the next meeting.]

MEDICO-CHIRURGICAL SOCIETY.

Nov. 12, 1833.

THIS was the first of the evening meetings for the season. A paper was read "*On the Appearances and Treatment of Fracture of the Neck of the Femur, within the Capsule; with Cases and Dissections:* by Mr. Howship."

The author commenced by noticing the unsettled state of opinion, as to union, briefly tracing the successive stages of that interesting process, in common cases of fracture, as deduced from his experiments on the subject, published in the ninth volume of the Transactions of the Society, and thence drawing a comparative view of the mode in which nature effects the union of fracture of the femur within the capsule, and as to the power which she appears to possess for establishing ossific union in such cases.

The author next described the changes observed in the seat of the injury, and after paying a just tribute of praise to the observations of Dr. Colles, and also to Mr. Langstaff, proceeded to state his own opinion, which favours the practicability of ossific union, where the age of the patient is not too far advanced, the constitution good, and the fractured surfaces retained in apposition.

In regard to the treatment, the author decidedly advocated permanent extension; concisely, yet clearly, explaining the means to be used in its adoption and management, by Desault's splint, or by the double-inclined plane.

The objections to the use of Desault's splint were next mentioned, and some few of the many cases in which it has perfectly answered its purpose briefly adverted to; in one of which, a circumstance somewhat unusual, to say the least of it, was stated to have occurred. The patient, a gentleman whose thigh having been twice fractured before, in the same part (just below the trochanters) was from the second accident found to be three inches shorter than the other, presented, after the third time of breaking, so satisfactory a testimonial in favour of the treatment, that the limb, it was said, had recovered more than two inches of its length, and when united was found, by measurement, only three-fourths of an inch shorter than its fellow!

The cases which conclude the paper are nine in number; and the preparations that illustrate eight of them, from Mr. Howship's collection, were placed upon the table of the Society, for the inspection of the members.

The subjects of the cases were all females; the youngest 53, the oldest 79 years of age. They were all instances in which Mr. H. had been enabled to ascertain the particulars of their history, and in which the injury was the consequence of a fall upon the trochanter. The examinations state, and the preparations demonstrate, the appearances, as observed at the intervals of three weeks, two months, five months, ten months, twenty-two months, eight years, and fourteen years, after the accident.

In two of the cases, the injury occurred without any immediate shortening whatever of the limb; and in one, by placing the fractured surfaces in apposition, nearly three months after the accident, retaining them in that state for a fortnight, a very fine specimen of perfectly compact ligamentous union was produced.

MEDICAL REFORM.

WESTMINSTER MEDICAL SOCIETY.

AT a meeting of the Westminster Medical Society, held on Saturday last, the 23d inst. and which was very numerously attended, the three resolutions which stand first were put and carried unanimously; the other six are to be discussed this evening:—

1. That this Society participates in the feelings which so generally pervade the members of the medical profession, as to the necessity of a parliamentary inquiry into the state of the medical profession in these kingdoms, with a view to its being placed on a footing more suited to the advanced state of medical science, as well as more consonant to the liberal spirit of the present age.

2. That the grievances at present so generally complained of by the members of the medical profession, appear to the Society, in a great measure, to arise from the existing constitution—whether by charters, statutes, or bye-laws—of some of the medical incorporations, to which the duty of regulating the profession in this country has been entrusted.

3. That by the charter of the Royal College of Physicians of London, being granted prior to the union with Scotland and Ireland, and at a period when the practice of medicine was, in many of its essential features, different from that of the present day; and its jurisdiction being virtually limited to physicians practising within seven miles of London; is inadequate to the important objects for which the charter was framed; and the bye-laws of the College, establishing an arbitrary distinction of practising physicians into two classes, or grades, has proved, and if permitted to exist will continue to be, a source of jealousy, when the interests of the public require the utmost cordiality and harmony.

4. That the privileges conferred by the charter of the Royal College of Surgeons, limiting the number of members of the Council to twenty-one, and giving to these

individuals the power of appointing others of their own number, whose appointments are to continue for life, and to whom is entrusted the examination of candidates for the diploma of the College, and by whom the regulations relative to their education are framed, is highly objectionable; and subjects the character of the Council to the charges of exclusion, self-election, self-perpetuation, and irresponsibility.

5. That the act of legislature by which the exclusive privilege of licensing the general medical praetitioners of England and Wales under the designation of apothecaries, is committed to a trading company, is derogatory to the character of the profession, and injurious to the interests of the public.

6. That the exemption of chemists and druggists from all control, as permitted by the Act of 1815, is prejudicial to the community; that it is highly expedient that all chemists and druggists should undergo a proper course of education and examination, and be duly licensed for the dispensing of medicines.

7. That any person assuming the title or designation of a medical practitioner, or acting as such, without being duly licensed, should be subject to penalties on information before the ordinary law tribunals.

8. That in the opinion of this Society, the evils now complained of will be remedied most effectually by the constitution of one Faculty or Academy of Medicine, which, under the direction of the legislature, shall preside over and regulate the education and practice of the medical profession throughout the united kingdom.

9. That the Committee of the Society be instructed to prepare petitions to the Legislature, embodying the principles of the preceding resolutions; and that the prayer of the said petitions shall express the wish of the Society that a Committee of the House of Commons may be appointed, to inquire into the present state of the education and practice of the medical profession throughout the empire.

TORSION OF ARTERIES.

Clot Bey has employed Amussat's method with complete success, on a marine whose leg was taken off in the Hospital of Alexandria. He secured the anterior and posterior tibial arteries by torsion, simply taking each vessel between the fore finger and thumb of the left hand, while with the right he turned it four or five times on its axis with a common ligature forceps. Not the slightest manifestation of a tendency to hæmorrhage was afterwards observed. This is one of the first trials of the method of torsion that have been made on the human subject.

BEST METHOD OF APPLYING LEECHES.

M. Mojon, of Genoa, recommends that cupping-glasses be used for applying leeches; six or eight of them should be put into one glass, and when partial exhaustion is effected by the usual process, the animals, for want of air, will by a sort of instinct attach themselves instantaneously to the elevated skin.

LIST OF NEW MEDICAL WORKS.

Macilwain's Practical Treatise on Stricture of the Urethra, 2d edit. 8vo. 8s. bds.—Macilwain's Practical Directions for facilitating the Diagnosis of Hernial and other Tumors occurring in the neighbourhood of the Groin; with Remarks on Tracheotomy, &c. 8vo. 4s. bds.—Macilwain's Clinical Observations on the Constitutional Origin of the various forms of Porrigo, commonly known by the names of Scald Head, Tinea, Ring Worm, &c 8vo. 3s. 6d. bds.—Dunn's Translation of M. Broussais on the Epidemic Cholera, observed and treated according to Physiological Principles, 8vo. 1s. 6d. sd —Vines's Appendix to a Practical Treatise on the most important Diseases incidental to the Horse, more particularly Glanders, Farcy, &c. 8vo. 2s. sd.—Wickham's Practical Treatise on Diseases of the Joints, 8vo. 7s. 6d. bds.—Dr. J. W. Williams on Diseases of the Lungs and Pleura, 2d edit. 8vo. 7s. bds.—Dr, Granville's Graphic Illustrations of Abortion, and the Diseases of Menstruation, 4to. bds. 30s. plain; 42s. coloured. —Cocks's Illustrations of Mr. S. Cooper's Surgical Dictionary, No. 38, 8vo. 2s. sd.—Dr. M. Hall's Principles of Diagnosis, 2d edit. 8vo. 14s. bds.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Nov.* 26, 1833.

Abscess	3	Inflammation	48
Age and Debility	62	Bowels & Stomach	16
Apoplexy	8	Brain	1
Asthma	29	Lungs and Pleura	19
Cancer	2	Insanity	6
Childbirth	11	Jaundice	1
Consumption	87	Liver, diseased	8
Convulsions	24	Measles	8
Croup	8	Miscarriage	2
Dentition or Teething	11	Mortification	8
Dropsy	10	Paralysis	1
Dropsy on the Brain	11	Rheumatism	1
Dropsy on the Chest	1	Small-Pox	12
Epilepsy	1	Sore Throat and Quinsey	2
Erysipelas	3	Spasms	6
Fever	12	Thrush	1
Fever, Scarlet	20	Tumor	1
Fever, Typhus	7	Unknown Causes	15
Hæmorrhage	2		
Heart, diseased	5		
Hooping-Cough	15	Stillborn	15

Increase of Burials, as compared with the preceding week . . . 154

NOTICE.

Dr. Negri's paper on *Secale Cornutum* has been received. We have not been able to find room for it this week, but hope to give it in its entire form in our next number; as yet, we understand, the reading of it has not been finished at the London Medical Society.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 7, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture IX.

PATHOLOGY of MENSTRUATION.

HYSTERIA.

It is, perhaps, not exactly the province of the obstetrical teacher to enter deeply into the subject of *hysteria*, as that disease is fully discussed in the lectures on the practice of physic; but since it is an affection peculiarly belonging to females, and frequently accompanies *amenorrhœa*, *dysmenorrhœa*, and other irregularities in the menstrual function, a short history of it will not be out of place here.

Etymology.—The name is borrowed from the Greek word ὕστερα; and from its derivation would imply some disease connected with the womb; it cannot, therefore, be applied with propriety to the male sex; although some of the most prominent symptoms of hysteria are occasionally met with in males, and especially about the period of puberty. The disease in males nearest allied to hysteria, is called *hypochondriasis*.

Predisposing causes.—Hysteria is most frequently met with in women of a delicate habit, who lead a luxurious life, and in those whose sensibilities are of the most acute kind: we therefore oftener observe it among the higher orders than the peasantry, or in the lower ranks of life; yet sometimes women of the most robust and hardy constitution become the subjects of this disease. Married as well as single women are exposed to it. Practical men have observed, that it more frequently attacks those who are not bearing children: thus Cullen remarks that young widows are particularly liable to hysterical paroxysms.

Divisions.—Nosologists have arranged hysteria among the diseases affecting the nervous system; and we may divide it into the regular and irregular kinds.

The irregular form is the most common; and it would be almost impossible to give a faithful detail of the appearances it assumes, since they are so numerous, varied, and complex, that to attempt to do so would be little more than to enumerate the symptoms of a multitude of separate cases; each case, indeed, differing from every other in some point, principally regulated by the peculiar diathesis or constitution of the patient. "Dies me deficeret," says Sydenham, "si omnia quæ affectus hystericos gravant symptomata enumerare velim; tam diversâ atque ab invicem contrariâ specie variantia, quàm nec Proteus lusit unquam, nec coloratus spectatur chamæleon."

REGULAR HYSTERIA.

Character.—The more regular form of the disease is usually met with in women of a somewhat robust temperament, and is chiefly characterized by occasional convulsive paroxysms, or *hysteric fits*, of which the following may be given as the history.

Symptoms.—Before the fit, for some hours, or perhaps days, there is observed a rumbling in the bowels, attended by distention, proceeding from flatulence; this is accompanied by a lowness of spirits, a distressing sensation of sinking at the præcordia, together with palpitations. Dyspeptic symptoms are mostly present, and sometimes diarrhœa, but more frequently a state of costiveness.

Previously to the accession of a fit, a sensation is often experienced similar to that of a ball rising into the throat from the abdomen, which impedes deglutition, and, in some degree, free respiration; this is not entirely a nervous or fanciful symp-

tom, as some writers say (among whom we may enumerate the authority of Van Swieten) that the throat is really in some degree fuller when this takes place. This symptom is called the *globus hystericus*.

Another peculiar feeling is a sensation of cold running along the spine, as if it were produced by a stream of cold water; and a third, which is more seldom met with, is a violent and sudden pain referred to one point of the head, as if a nail were being forcibly driven into the skull. This we denominate the *clavus hystericus*.

Soon after one or all these symptoms have appeared, and sometimes without such premonitory indications, the patient sinks down convulsed; the breathing becomes very much distressed; she shrieks, or utters a crowing noise, somewhat like the crowing of a cock; the muscles of respiration act strongly and spasmodically, producing deep sobs and sighs; she will then burst into involuntary laughter or crying; and these generally alternate till near the termination of the fit. The convulsive spasms continue, with greater or less power, for many minutes, and are sometimes so strong as to require two or three persons to restrain their violence, and prevent the patient injuring herself. The paroxysm declines gradually; faintness supervenes upon the excessive agitation of the muscular organs; and after remaining quiet for a few minutes, by degrees she recovers, and becomes restored to her former state. While the fit lasts there are constant eructations, and a discharge of limpid urine takes place, which is so usual, that Sydenham considers it a pathognomonic symptom. The face is alternately flushed and pale, and she appears insensible; on recovery, however, she is perfectly conscious of having been ill, and recollects most of what has happened. When the spasms cease she is feeble, and complains of palpitations, giddiness, cramps, and numbness of the limbs. A headache is generally left for some days. Such an attack usually occurs a short time previous to the return of the catamenia.

Diagnosis.—There is scarcely a chance of a fit of regular hysteria being mistaken for any other disease, if the symptoms are accurately borne in mind; it is more easily confounded with epilepsy than any other. Sometimes, indeed, we see mixed cases, in which epilepsy and hysteria appear blended. In a well-marked epileptic paroxysm, however, the appearance of the countenance is much more frightful than in hysteria; the muscles of the face are more hideously contorted.—In hysteria, although they are strongly convulsed, there is a more placid expression; and the expression varies quickly, being sometimes sorrowful, then suddenly putting on a laughing character. In epilepsy also, the saliva runs from the mouth, producing a frothy foaming at the lips, and a hissing noise in inspiration;—in hysteria this seldom or never happens. In epilepsy the tongue is occasionally protruded through the teeth, and lacerated by their closure; and the saliva running from the mouth is consequently tinged with blood:—this, I may say, never occurs in hysteria. Under an epileptic fit there is not usually a discharge of urine, and no feeling similar to the globus hystericus is experienced. But the chief diagnosis will be found in the state of the mind. A patient, when recovering from an epileptic attack, is perfectly unconscious of what has happened during the fit,—whilst after an hysterical paroxysm she mostly remembers all that has occurred, although at the time she appeared quite insensible.

Prognosis.—There is no danger of a woman dying in an ordinary hysterical fit. I do not know a single instance of death taking place under such circumstances, unless, indeed, it was produced by the rupture of a blood-vessel, the bursting of an aneurism or internal abscess, or some other such accident—the immediate cause of which, indeed, might have been the violent struggling and muscular contortions suffered by the body,—whilst the origin of the complaint was perfectly unconnected with the hysterical diathesis.

Causes.—The immediate cause of an hysterical paroxysm may be said to be any thing having a tendency to derange the nervous system, in those persons predisposed to the disease. The passions of the mind have a great influence in producing it. Thus any great emotion, such as joy, grief, surprise, sudden shocks or frights—all these are by no means uncommon causes of a fit. We often hear of the sight of a serious accident throwing a patient into an hysteric fit.

Treatment.—In the treatment of regular hysteria we have, in the first place, to endeavour to cut short the convulsive spasms; and secondly, to induce a more healthy state of system, so as to prevent any return.

During the fit.—We shall best cut the fit short, by placing the patient on her back, unlacing her stays, opening the windows, and allowing a free circulation of cold air through the apartment; by rubbing her temples with lavender water, eau de Cologne, or vinegar; by applying volatile salts to her nostrils; and,—of all other means the most efficacious,—by dashing a basinful of cold water on her face and neck. The shock produces a sudden sob, respiration is suspended for a few seconds, and the convulsions almost immediately

cease. If the patient can swallow during the fit, or soon after, it is desirable to give her some kind of stimuli; those which are called *diffusive*, such as ether, camphor, or ammonia, are better than unmedicated spirit. A tea-spoonful of the common spirit of hartshorn may be given in a wine glass of cold water; and this, as being almost always at hand, will generally be found a most useful and available remedy. Professor Burns, a very high authority on all subjects connected with female diseases, recommends that thirty drops of laudanum should be given as soon as the patient can swallow, with a view of putting a stop to the paroxysm. I cannot object to this medicine; it may be tried, and if found once to answer, may be given to the same patient on any recurrence of the attack; it might be advantageously combined with ether or ammonia.

General treatment.—The permanent cure must be attempted by inducing such a change in the system generally as will gradually restore the healthy actions of the uterus, if deranged, of the alimentary canal, and of the other organs of the body also; for I am persuaded that in this disease many of the great viscera are sometimes morbidly affected, and that it is impossible to cure the hysterical state unless attention be paid to the due performance of all the principal functions of the body. If the fits should be very severe, leaving a fixed pain in the chest, side, head, or bowels; and if the patient be plethoric, it may be right to bleed. We must be cautious, however, in the use of this powerful remedial means, and never abstract blood by the lancet unless we have reason to believe that congestion or inflammation exists in some organ, or unless there be decided plethora. In general the lancet will not cure, nor even relieve the violence of hysteria; and in many cases I think it would be more beneficial to add to, than abstract from the quantity of circulating fluid.

We must especially beware of the pain in the head which is left after each paroxysm, however severe it may be, tempting us to use the lancet freely. This pain is neither congestive nor inflammatory, but what, for want of a more definite and expressive word, may be termed *nervous*.

These observations will not apply, in their full force, to local bleeding; six or eight leeches may sometimes be applied to the temples with advantage, or the cupping-glasses may be used on the back of the neck. Cold applications to the forehead will sometimes be found highly beneficial. The best mode of applying cold is by means of a bladder half filled with ice; at the same time the hair should be thinned, or the head shaved. The application of blisters to the neck, or head, have been occasionally of service: the most efficacious method of employing a blister, is by producing a vesication over the seat of pain, which is usually referred to some part of the coronal suture, and applying to the abraded surface a piece of linen steeped in Batley's solution of opium, or some other anodyne drug. This practice will require the head to be close shaved. If constant pain in the situation of any particular organ in the trunk, accompanied by other symptoms, induce you to believe that congestion or inflammation exists, besides the general bleeding which would be in that case perfectly warrantable, and perhaps quite necessary, leeches may be applied to the part; or a blister, a sinapism, or stimulating liniment, will frequently produce beneficial results.

No practice can be more injurious than that which is constantly adopted, of treating all cases of hysteria exactly alike—by stimuli, tonics, and carminatives—because it happens to be a variety of hysteria. As the phenomena vary with each kind of constitution and diathesis, so almost every patient requires a modification in our mode of cure; and we must watch each symptom as it arises, employing ourselves chiefly in combatting the most distressing. On a general principle, however, we may probably prevent the recurrence of the fits by regulating the bowels, giving every day a moderate and warm purgative—such as the aloes and myrrh pill, compound cambogc pill, with some essential oil; or a pill made with soap, scammony, and essential oil; and at the same time pursuing a tonic course, both by medicines, diet, and exercise. Thus steel may, in some cases, be advantageously administered, with any of the bitter and aromatic infusions—calumbo, bark, gentian, cascarilla, orange-peel, or cloves. The diet should, in all instances, be light, though not sparing; a little taken at a time, and frequently. Meat should be allowed, and wine, if there be no contra-indicating symptom. Whatever induces flatulence should be avoided—such as crude or ascescent vegetables. Gentle exercise is most desirable; either walking or riding on horseback, if the strength permit, or otherwise in a carriage: both with a view to throwing the muscles into action, and also for the sake of change of scene and amusement; for there is generally observed, as before said, a greater or less degree of despondency, which it is highly necessary to remove: the mind should therefore be employed in whatever best suits the taste of the patient, and kept from brooding over any fresh symptoms that may appear.

In some cases, a complete change in the habits and mode of life will put an end

to hysteria without the addition of medical regimen. Thus the removal from a large town into the country, or out of the influence of any constantly operating cause of anxiety or distress—the giving up late hours, and avoiding heated rooms and large assemblies; the changing the hour of dinner from the evening to the middle of the day; will sometimes be of themselves sufficient to restore health. The most strongly-marked case of regular hysteria that ever came under my notice, was entirely removed by a complete alteration in all the habits. It occurred in the person of a young lady who had lived in London the greatest part of her life. I attended her for more than two years, during which she was occasionally attacked with violent hysterical paroxysms. She left London to reside at a farm-house, and led a life diametrically opposite to that she had been accustomed to. From the time she left, although she was then in the worst state that I ever knew her, she had but one return of the fits. She has come back to London since that period, and is still perfectly free from any hysterical affection. The disease has sometimes subsided on marriage: a remedy not always in the power of the physician to prescribe.

If, with hysteria, there be present any irregularity of the menstrual action, that must be regarded as connected with, if not the primary cause of, the hysterical disorder; and by rectifying it, we shall usually cure the accompanying hysteria.

It must not be forgotten that hysteria sometimes occurs in conjunction with other more dangerous diseases, and masks the more important disorder, because the hysterical symptoms are the most prominent—those which most powerfully and immediately arrest the attention of the patient, and on which she lays the greatest stress: the medical attendant's thoughts are thus distracted from the more serious complaint, and his means directed towards the cure of the hysteria alone. In all cases of hysteria, therefore, it behoves us to be particular in inquiring whether any of the organs essential to life are functionally deranged in a material degree, or have undergone any change of structure.

IRREGULAR HYSTERIA.

History.—On the irregular form of this disease I have not many observations to offer: it generally attacks women of the most delicate constitution: it is not accompanied by fits, but occasions many distressing symptoms and sensations, so various as scarcely to admit of description. These are observed in every degree, from mere inconveniences to the most acute pain and alarming appearances. The most common (independently of the *globus* and *clavus hystericus*, with some other of the symptoms just noted) are a continual state of nervousness, excitability, timidity, and agitation, proceeding from little or no assignable reason, and often called forth by the most trifling noise; excessive want of determination and resolution; great inequality of temper; the spirits being very uneven, sometimes inordinately high, and then again as much depressed, with equally slight cause: despondency, however, generally prevails, and there is much inclination to exaggerate all the sufferings endured, as well as to view every, the most trivial, occurrence through a distorted medium. The assurance of recovery, in most other diseases so gratefully hailed by the patient, in this will scarcely be listened to, and only tends to increase the irritability. In a more intense degree, we have acute pain referred to some part of the chest or abdomen, so that the pressure even of the most superficial touch is not borne without excessive complaint; the hand of the physician is generally pushed rudely away, however gently applied, and the subject is impatient of examination, although very urgent for relief. Palpitations, syncope, or dyspnœa, are usual accompaniments of this state; and sometimes there is a violent, hoarse, dry cough, either continued or recurring in paroxysms, with occasional loss of voice, partial or entire; at others, sudden attacks, resembling the most suffocating form of spasmodic croup, come on; spasms of the bowels, hiccough, retching and vomiting; the sensation of a ball rolling about within the abdominal cavity, and rapid evolutions of gas, producing sudden tumefaction of the abdomen, almost approaching to a tympanitic state, and requiring the immediate loosening of the dress for relief, are often observed;—these usually occur soon after a meal. Retention of urine, most probably dependent on spasm of the *sphincter vesicæ*, is one of the most distressing, but by no means unfrequent symptoms of irregular hysteria. Sometimes the chief annoyance consists in a pain and throbbing in the head, occasionally general, more often confined to one particular spot, accompanied by intolerance of light and sound, inability to sleep, and disordered imagination. With this is often combined excessive coldness of the extremities; so that, as Sydenham remarks, the sensation conveyed by them resembles that communicated by touching a dead body; whilst the pulse continues almost natural. Again: they are sometimes so morbidly sensitive that the most gentle pressure occasions acute pain.

In the most inveterate form, symptoms producing even greater distress manifest

themselves; such are, spasmodie twitchings of the limbs, almost amounting to chorea, or tonie contraetions of the hands and feet, attended with much pain, not unlike tetanic spasms. The cephalie affeetion appears in even an aggravated degree, and there is observed stupor, coma, delirium, or mental imbeeility.

Diagnosis.—From the slight sketch which I have given of this protean disease, you will observe what varied shapes it assumes, and with how many other disorders it is liable to be confounded. It is eharaeterized, indeed, by affeeting in the same or different instanees, singly or conjointly, most, if not all, the several organs eonstituting the animal body; those of pereeption, respiration, digestion,—the muscles, both voluntary and involuntary,—the heart, and the arterial system—are all liable to suffer more or less; and you may readily suppose that the diagnosis is by no means easy: for the diseases peculiar to each are eounterfeited with much exactness. The pain might induee belief that violent inflammation was set up in some particular viseus; but the very acuteness of the suffering will generally lead us to a knowledge of the disease. In hysteria, when pain attends, the slightest toueh can scarcely be endured, and produces as mueh annoyanee as more steady and decided pressure; but in inflammation, the suffering is only aggravated by positive pressure. In hysteria, also, the pain is seldom eonstant, and often erratic. Very different this from inflammatory pain. The state of the tongue and eireulation are not to be overlooked in forming our deeision; and particularly we must attend to the previous history of the patient—her age, peculiar constitution, and the mode in which the attack eommenced. We shall most probably learn that she has been repeatedly the subject of the same kind of affection; we may then suspeet an hysterical diathesis; we shall ascertain that the attack in its commenecment was marked by hurry and alarm; and observe the unsettled nature of the pain; the number of organs apparently involved; the multiplicity and urgency of the external symptoms, without a corresponding agreement either in the appearance of the tongue or rapidity of the pulse; and the general excitability of the nervous system. Dr. Ferriar remarks, that these apparently dangerous symptoms are often cut short by the supervention of a regular hysteric paroxysm; and he considers such a termination as the principal source of discrimination.

Treatment.—Respecting the treatment of this variety, I have little to add to what I have already said when speaking of the regular form. Our great object must be directed towards emptying the bowels, restoring the chylopoietic viseera to healthy aetion, calming the exeessive nervous exeitability, and allaying local pain. The first indication will be best answered by alterative doses of mereury, and warm purgatives; the seeond, by the milder sedatives, and antispasmodics, as eonium, hyoseyamus, and white poppies;—ether, camphor, valerian, assafœtida, ammonia, musk, and other medicines of the same deseription; the third, by local applieations, consisting either of warm anodyne fomentations, or blisters and cataplasms. Leeches may sometimes be necessary; but I must again warn you against taking blood largely, especially by the lancet, unless there be evident symptoms of inflammation, or a general plethoric diathesis. It is on this account particularly that it is so necessary to establish a correct diagnosis between the pain of inflammation and that arising from nervous exeitability. I acknowledge that the perfect freedom from pain, almost immediately following depletion, holds out a great temptation to the praetiee, and to its repetition. This relief, however, is but temporary, and evanescent; it seldom lasts longer than the faintness indueed, and returns with a revival of arterial action. If the lancet be had reeourse to, whenever there is an increase of suffering, under the hope that the ease obtained will be permanent, the strength will be gradually broken, the system redueed, and the powers of life eventually undermined. As life declines, and the sensibilities become blunted, hysterical affections are generally mitigated; and on the cessation of the catamenia, entirely disappear.

SOME REMARKS

UPON THE

PREREQUISITES OF PROFESSIONAL EDUCATION;

Addressed to the Medical Pupils of St. Bartholomew's Hospital,

By P. M. Latham, M.D.

Tuesday, November 12, 1833.

I wish to address a few observations to those of you especially, who, having passed through various preliminary studies in this great school of medicine, have now reached that department of instruction in which it is my lot to be engaged with you—viz. the elinical observation of disease, and the effects of remedies. And I have abstained from calling you together for this purpose

until now, in order that by a few weeks of previous intercourse, and by our better knowledge of each other, I might enable myself to speak more freely to you concerning the position in which you now stand, your present and your past studies, and your future fortunes in life, which are so mainly dependent upon them.

Your education is now at length concentrating itself to its great object: the time is arrived when you are to direct your minds expressly to the knowledge of diseases, and their treatment. All that you have hitherto learnt in all the schools of instruction which you have ever frequented, you must bring with you, and make it ministerial to *this knowledge*. I talk not of science and philosophy *only* in those departments which bear immediately upon medical instruction; nor of science and philosophy *only* in any shape; but of every thing whereinsoever your intellectual and moral nature has been cultivated and improved at any period of your lives. Every good principle received from the counsel or example of parents in your earliest years—every laudable habit derived from fortunate association with good men—every maxim of prudence and virtue from good books—and, if there be a higher source (as I trust there is), to which some of you have looked for the proper motives, and ends, and hopes, and destinies of man, and really know what they are—bring these, bring all that you possess, and engage them in active exercise, and link them to the great business of your lives: for now that business may be properly said to begin. It is that by which you are to live and take your station in the world;—to do good, or to do evil; to gain friends or enemies, honour or dishonour; and in which the great accountable talent committed to your use will be well or ill employed.

There are certain stages in the progress of any great design, at which men are apt to pause, and look back upon what has been accomplished hitherto, to see if there be any errors to correct, any omissions to supply, that thus every thing may be rightly ordered as they go along, and made fit and conducive to the chief end they have in view.

You are now arrived at such a stage in your professional education. Having gone through many preliminary studies, you have reached the most important of all—that for the sake of which all the rest were prescribed to you. And from this point you cannot help looking back; and you must look back with much or little satisfaction, according as, with much or little diligence, you have well or ill secured each preceding stage. The knowledge which lies behind is our natural help to that which lies before. Those, therefore, who have been diligent and learnt much, I do indeed congratulate; for their further advancement will be easier and safer, and with a greater interest. But those who have been idle and learnt little, I can only exhort to spare no pains in endeavouring to supply their deficiency; for, until they do so, the objects I am concerned to point out to them they must view with little interest, and will very darkly apprehend. Yet these objects are important to them above all others; for they are calculated to teach them practical knowledge and practical skill in the exercise of their profession.

But what is it, and how much is it, that a student ought to know, before he can betake himself with effect to the observation of real disease, and hope to acquire a practical skill in treating it? This is a question which, I make no doubt, you have often asked, for your own sakes, since you are especially concerned that it should be satisfactorily resolved. And I, for my own sake, as well as yours, have often thought upon the same question; for I would not willingly mislead, by any rash answer or recommendation, those who, from the situation I hold in this place, might venture to trust to my advice.

There is no subject which at this time more needs the consideration of sober-thinking and reasonable men, that that of professional education.

The subject of education generally is one of great difficulty; yet, strange to say, it is one upon which any body thinks himself qualified to construct a system, and establish rules, and dictate to a whole community; not aware, perhaps, that the wisest men have exercised themselves upon the same, with very doubtful success.

Milton wrote a treatise on Education, and so did Locke. And it was in reference to them that Dr. Johnson said, "Education in England has been in danger of being hurt by two of her greatest men."

Strange things have been said in jest, or in earnest, concerning the studies necessary to form a physician. Sydenham advised Sir Richard Blackmore to read Don Quixote. He probably spoke in jest. But it is impossible to read Sydenham and not perceive that his mind did in truth hardly admit any auxiliary to the exercise of its own observation. What he says of anatomy must startle the pains-taking pathologist of modern times, who bestows all his industry in tracing diseases home to the primitive structure in which they are engendered. Anatomy, he has told us, is only fit for a painter. Sydenham might have been *professionally* learned; but there is no evidence in his works that he was so. Perhaps he was offended with the kind of learning then in repute, which tended to

make the practice of physic rest chiefly upon authority; or perhaps the very structure of his mind was such, that it was really incapable of gaining any thing second hand which it could gather fresh from the reality; or perhaps he had a noble confidence in that wonderful faculty of observation with which he was endowed, and so resolved to use and to trust it to the uttermost, unaided and unencumbered by any foreign helps.

But Sydenham's education, in so far as it was not professional, was evidently of the best kind. His mind had been early acquainted with a strict, indeed with a scholastic discipline. His book is that of a scholar; I do not mean on account of the language in which it is written, but in its form and structure. Without any apparent artifice, the material facts, and delineations, and histories, arrange themselves all in the right places for being well understood; and they are all so skilfully reasoned upon as to lead you easily and naturally to the conclusions he desired.

Are we then justified, not by the advice of Sydenham, which was probably spoken in jest, but by his example, in concluding that nothing more is required, to fit a man for the safe and successful practice of physic, than a good *general* education, and an industrious use of his own observation in his intercourse with the sick? I think not; and, among many other reasons, especially for the two following:—First, because you cannot tax the faculty of observation beyond its *common* powers and capacities; you cannot estimate it in the generality by what it was in Sydenham, and look to it for the same results. This would be the same thing as to take measure of all mankind by the proportions of a giant, and make the single wonder of a hundred years the common expectation of every day.

Secondly, supposing the faculty of observation existed in each of us at its utmost perfection, and enabled each to learn by it all that it is in its own nature capable of teaching, yet there are objects beyond its reach, the knowledge of which have, in the progress of our art, come to be considered as essential to the safe and successful practice of physic, as those which lie strictly within its sphere; I mean the knowledge of morbid processes in all their variety, as they affect the structure and functions of our bodies. This knowledge has been derived from other methods of research, from anatomy, from chemistry, from experiment; and you can only gain it either by the use of such methods yourselves, or from the instruction of those who have used them. Sydenham himself could gain it in no other way.

But in our own day, there is little fear that students will be spoiled by the recommendation of their instructors to be content with a scanty knowledge, and trust to their own sagacity for the rest. They are not likely to suffer harm by having Sydenham held up as an example for imitation: the fear is of another kind (and it is well grounded), namely, that many men of the best abilities and good education will be deterred from prosecuting physic as a profession, in consequence of the necessity indiscriminately laid upon all for impossible attainments, of which no example either is or can be held forth for their imitation.

The different professions have one way of glorifying themselves, which is common to all. It is by setting forth a vast array of preparatory studies, and pretending they are indispensable in order to fit a man for the simple exercise of its practical duties. I have heard lawyers make such a mighty parade of what a man must know before he is called to the bar, that, according to the average of human capacities, not one man in fifty has the smallest chance of mastering them; and of those who do master them, not one in fifty can employ them to the uses for which they are intended.

I once saw a list of books recommended by a professor of divinity to the study of those going into holy orders. They were more numerous than the majority of even studious men ever read in their whole lives: yet these were a few prolegomena introductory to the office of a parish priest.

We, too, conceive that it befits our dignity to magnify ourselves at certain seasons. The commencement of a session is usually the time chosen; and then, what a crowd of wonderful things are marshalled by authority around the entrance of our profession! And through this crowd, it is implied, every man must press his way before he can gain admission. As if we wished to guard and garrison ourselves against invaders, rather than to gain good and useful confederates! In the affair of literature are reckoned Latin, and Greek, and French, and Italian, and German. In the affair of science, mathematics, and metaphysics, and mechanics, and optics, and hydraulics, and pneumatics, mineralogy, botany, zoology, and geology. Of astronomy I find no mention; and I marvel much that it should have been overlooked.

Such are the portentous forms that guard the threshold. But further onward are placed anatomy, human and comparative, and morbid; physiology and pathology; chemistry, general and pharmaceutical, and materia medica; surgery, theoretical, clinical, operative, and ophthalmical; medicine, theoretical, clinical, obstetrical, and forensical.

The general display of objects, so grand

and multifarious, is formidable enough; but not half so formidable as their representation in detail. Of the great cosmogony of medicine there are several departments, and each professor never fails to magnify his own, by counting the cost of time and labour which you must be prepared to bestow if you wish to make any reasonable progress in it. "Haller (perhaps such an one will say) surely knew what anatomy is, and how much goes to make an anatomist; and Haller has estimated the cost at twenty years of time and labour."

Now I am persuaded that there does not exist at this day in the profession an individual who comes up to the standard which (it is implied) all ought to reach. It has been my happiness to know many men in my time who have had enough of attainment to command my highest respect; some who have reached great eminence during their lives, and some who have been thought worthy of monuments since their deaths; yet I have known one, and one only, who came up to the requirements of an introductory lecture, which I have read; and that was Dr. Thomas Young. But Dr. Young stood alone among mankind. The most learned and scientific men of his time were struck with wonder at the extent and variety of his knowledge: yet Dr. Young was the only person whom any man now alive ever saw learned and scientific enough for a physician, according to the Utopian measure of things.

If all medical students had fifteen or twenty years at their disposal, and could dedicate them all to professional education, we might pardon a little innocent declamation in displaying the rich and varied field of knowledge about to be disclosed to them; but even then, sober truth would compel us to confess that the field so pompously displayed far exceeded in extent what the best minds could hope to compass, even in fifteen or twenty years. When, however, we recollect what space of time the majority of men so addressed really can give to their education, the whole affair becomes inexpressibly ludicrous.

Now I do protest, in the name of common sense, against all such proceeding as this. It is all very fine to insist that the eye cannot be understood without a knowledge of optics, nor the circulation without hydraulics, nor the bones and the muscles without mechanics; that metaphysics may have their use in leading us through the intricate functions of the nervous system, and the mysterious connexion of mind and matter. It is a truth: and it is a truth also that the whole circle of the sciences is required to comprehend a single particle of matter: but the most solemn truth of all is, *that the life of man is threescore years and ten.*

How has it happened, that while, in other countries, the medical profession has been exhibited under every imaginable form of ridicule, here, in England, it has been so seldom chosen as a fit thing to laugh at? The truth is, that here no idea of ridicule was ever popularly associated with it; and to have exhibited it as if there were, would have been out of nature, and unsuccessful.

A vain, pompous, counterfeit form of knowledge without, and a downright solid ignorance and incapacity within, made up a precious combination, which, not long ago, was found every where abroad. The mockery and fun that it excited was irresistible and inexhaustible; and Moliere and Le Sage made the world ring with laughter at the expense of physic and physicians.

Depend upon it, what all men indiscriminately are told they *ought* to know, all men indiscriminately will soon *pretend* to know, be it ever so extravagant; and when every medical man, in every town and village throughout England, be he physician, surgeon, or apothecary, shall, in right of his profession, claim the homage due to vast learning and science, there will not long be wanting some Moliere or Le Sage to hold us all up to the just ridicule of mankind.

Take care, then, what you are about, and beware how you change the character of the English practitioner of physic. He is sound and unpretending, and full of good sense; what he wants, is a little more careful and a somewhat larger instruction in what bears directly upon the practical part of his profession. Give it him (indeed you *are* giving it him), and he will become more trust-worthy and more respected every day. But for all that is beyond this, you may recommend it, but you must not insist upon it; you must leave it for each man to pursue according to his leisure, his opportunities, and his capacity, and not exaggerate it into a matter of necessity for all.

I know that much disquietude, if not unhappiness, has been felt by students, and especially by the best informed and best disposed, when, at the entrance of their profession, they have been met by obstacles which seem insurmountable. It to the special infirmity of ingenuous minds is reflect with too much anxiety upon their own progress in knowledge—to sit in judgment upon themselves; calculating whether they have made the best of all their opportunities, and wishing, vainly wishing, that their time might come over again, to enable them to supply this omis-

sion, or rectify that mistake. By many such, who are at all times too ready to deal hardly with themselves, every exaggerated statement of what they are required to learn is severely felt.

A well-weighed scheme of professional education, sound and practicable, comprehensive yet moderate in its acquirements, and adapted to all, besides the many good purposes it would serve, would have the special benefit of satisfying the minds of students themselves, that at each step of their progress they are in the right path. Such a scheme we are not likely to have soon. I will not presume to suggest what it ought to be; I would rather endeavour to shew you, that, in spite of what you are perhaps at present inclined to fear, you may hope to earn a good reputation, to deserve and gain the approbation of mankind as others have deserved and gained it, although you do not possess a perfect literary and philosophical education.

Turn away, then, from the contemplation of this ideal perfection, which can only make you despair, and look to some real examples for your encouragement. But take care that they be *high* examples, and such as no small or ignoble efforts can imitate. I could choose them from among living men. For there are living men who would satisfy my own notion of what a physician ought to be. But I prefer to look for them among those that are gone, because there can then be neither offence nor envy in the selection. They shall, however, be such as are fresh in the memory of contemporaries, that I may have witnesses to the truth of what I say.

I will take Dr. Baillie and Dr. Babington; and I am content that the *general* estimate of the physician's character should be measured by what mankind at large thought of these two. Their intercourse with the world was large; and it is more than probable that a great portion of the best informed men in their time did, in point of fact, form their notion of what a physician ought to be, from what Dr. Baillie and Dr. Babington actually were. I am content also that the *professional* estimate of the physician's character should be taken at the worth in which medical men held them.

Perhaps no men that ever lived were better understood, not merely in the general outline of their characters, but in all that nature, or erudition, or experience, or habit, or fortune, had made them, than were these two eminent physicians. They had both been public instructors in the lecture-room, and in large hospitals, and both had immense private practice. Of those who are now exercising their profession in the maturity of their age and experience, many were their pupils; and almost all the medical men of London have met them in consultation.

Now the reputation of Dr. Baillie and Dr. Babington would not be exalted by any lavish praise of them for qualities which they did not possess. They do not need our commendation for what they were not. Enough will still remain to make us content to be what they were, although it should be denied that either of them was remarkable for the extent or variety of his acquirements. We may still take them as our examples, although neither of them did, or ever pretended to possess, a knowledge of one-half the things now recommended to the medical student as indispensable. In truth, those who knew them best, and admired them most, will not say that their admiration of either was called forth by the many things they understood beyond all other well-educated physicians.

Dr. Baillie was an anatomist, and Dr. Babington a chemist. And thus each had chosen well a department of knowledge on which their minds seemed most capable of being exercised with a happy result. The minds of both had their natural bent towards matter of fact; and the favourite pursuit of each served, by its very use and exercise, to perfect their understandings according to the mould in which they were originally cast.

The one taught anatomy, the other chemistry, with great reputation and success; and both were deeply and experimentally versed in what they taught. But neither was anatomy in the hands of Dr. Baillie, nor chemistry in the hands of Dr. Babington, made subservient to any great purposes of physiological or pathological discovery. Yet doubtless they *are* capable of such purposes, and to such they have been made to contribute by others. But education contemplates the ordinary fruits of knowledge. What is new exceeds its calculation. Men are not educated for discoverers; these stand alone; for they become what they are, beyond, and often in spite of, their education. They can never be quoted as examples.

But the fruit of their knowledge to the two eminent men in question was nothing more than the ordinary fruit; and therefore I chose them as examples. It was the ordinary fruit, but its measure was large. Their knowledge of anatomy and chemistry served them for all the purposes to which they are immediately applicable in the daily exercise of their profession; and, being in harmony with the natural bent of their minds, it still kept them striving after accuracy in all their investigations, and confirmed them in the habit and skill of appreciating the truth.

I am far from saying that in anatomy and chemistry consisted all the scientific knowledge they possessed, subservient to the uses of their profession. Herein, however, consisted the strength of their knowledge; and, for the rest, they were well-educated gentlemen. But I will venture to affirm, that had Dr. Baillie and Dr. Babington been constrained to accomplish half the course of literature and science now recommended for common professional education, they would, from the very texture of their minds, have been utterly spoiled as physicians.

My experience of human life has long since convinced me, that the number of truly learned and scientific men in the world is small. Therefore, real learning, and real science, must be things of difficult attainment, since so many are engaged in their pursuit. But be their *attainment* ever so difficult, it is not half so difficult as their *use*.

Knowledge may be an encumbrance as well as a help. Many men know more than they are able to wield. There is a point (I believe) in the acquisition of knowledge (and this point varies infinitely in different individuals), beyond which, if more be acquired, the whole mass becomes useless to its possessor. I am acquainted with men who never have *done*, and never can *do* any thing, because they *know* too much; and I am acquainted with men possessing comparatively small knowledge, so dextrous in its use, that they have ridden over the heads of others far, very far, their superiors in acquirement. Nothing is more common than to hear it said of some eminent and distinguished person, "eminent and distinguished as he is, what would he not have been had he possessed the learning of such an one!" Whereas, if he had possessed one particle more of learning than he has, he would have been nothing at all; it would have weighed him down, and he would never have been heard of.

I am not speaking of pretenders, who succeed nobody can tell how—these are jugglers and mountebanks—but of those who succeed we *do know* how, and know it to be by dint of a knowledge not necessarily large, but solid and well chosen, which is (as it were) ingrained into their minds, and always at hand, and always producible for its purpose.

Fortunate indeed is the man who takes exactly the right measure of himself, and holds a just balance between what he can acquire and what he can use, be it great, or be it small!

With all becoming deference to those who so loudly trumpet forth the praises of knowledge, and fright the trembling student with a portentous array of the wonderful things he has to learn, I would venture to crave some little regard for what is not so much as named by them, but what is pre-eminently more important than knowledge itself. I mean wisdom, as a thing distinct from knowledge, but not opposed to it; requiring, indeed, knowledge to work upon, but taking care to proportion that knowledge to the real end which itself (wisdom) has in view. I marvel that this wisdom is not enumerated among the ingredients of the physician's character, since it is conspicuously the chief of all, and was unquestionably that which gained for the two eminent men whom we have mentioned the praise which they justly merited from mankind.

It is, however, in its very nature, a thing too lofty for me to venture to describe. You shall learn what it is from one who well understood how distinct it is from mere knowledge, and who was himself endowed with it in a measure beyond ordinary mortals.

"Wisdom," says Robert Hall, "is to be distinguished from knowledge, to which it bears an affinity, but ought not to be confounded with it. Though wisdom necessarily presupposes knowledge, and it is impossible to exercise it in things of which we are ignorant, yet it ought to be something more practical, and rather more comprehensive: it ever bears a relation to the end, and, in proportion as it is more perfect, to the highest and the last end the agent can be supposed to have in view. It first judges of the end fittest to be pursued, and next determines what are the most fitting and suitable means of accomplishing it.—It being the province of wisdom to preside, it sits as umpire in every difficulty, and so gives the final direction and control to all the powers of our nature. Hence it is entitled to be considered as the top and summit of perfection.—It belongs to wisdom to determine when to act, and when to cease; when to reveal, and when to conceal a matter; when to speak, and when to keep silence; when to give, and when to receive; in short, to regulate the measure of all things, as well as to determine the end, and provide the means of obtaining the end, pursued in every deliberate course of action*."

More simply, but with equal majesty and truth, spoke another of congenial mind upon the same high subject.

"Knowledge and wisdom, far from being one,
Have oft-times no connexion. Knowledge dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own.
Knowledge, a rude unprofitable mass,
The mere materials with which wisdom builds,
Till smooth'd, and squar'd, and fitted to its place,
Does but encumber whom it seems to enrich.

* Vol. V. Sermon xxiv.

Knowledge is proud, that he has learnt so much;
Wisdom is humble, that he knows no more*."

These words might have been spoken by an oracle, they are so suitable both to learners and teachers of our profession at the present day. We, of all men, ought to seek knowledge, not for the sake of being *knowing*, but for the sake of being wise; and those who are our masters, and are to tell us what we ought to learn, should not make a pompous announcement of all the wonderful things with which medicine may hold a possible alliance, but should prudently select and measure the knowledge required, with a view to the general capacity, and conformably to its end.

In laying down any scheme of education, you must take care to make it suitable to the majority of those who are to be educated. There may be circumstances in their condition and objects, rendering that education, which is the best in itself, not the best for them. Such circumstances belong, in an especial degree, to our profession. Very few enter it who are not to live by it: very few who are not required to exercise its practical duties *early*, from the necessity they are under of beginning as soon as possible to support themselves. So that the majority cannot wait to be made philosophers before they become practitioners.

These are homely considerations; but they are true, and most important to be borne in mind;—so important, that they, above all other considerations, ought to regulate the kind and extent of knowledge which should generally constitute the education of medical men in this country. Herein is involved a very urgent necessity. It is inherent in the state of society. You cannot alter it: you cannot evade it. Conform to it you must, if you desire to provide for the well-bringing up of those in whose assured competency to the fulfilment of their peculiar duties mankind have the highest interest.

This necessity, under which the majority find themselves, of exercising their profession *early*, requires that they should be made practitioners in the *easiest* and the *nearest* way. Their knowledge should be of things obviously and confessedly necessary, and this knowledge ought to be rigidly exacted, and nothing more; for if you go beyond this, you ruin the purpose you wish to serve.

There are, doubtless, many things *out of* the profession, by the previous knowledge of which, the things *within* the profession are better understood. Such previous knowledge you may recommend, but you must not demand it. You may *recommend* that every man, before he enters upon the study of physic, should obtain the best general education within his reach; but you must specify nothing as absolutely necessary but what bears immediately upon professional use.

Now, that is *absolutely necessary*, and must be studied prior to experience, without which experience itself will hardly profit us when we have obtained it. And that is *absolutely necessary*, and must not only be studied prior to, but must be still cultivated simultaneously with, experience, without whose constant help and guidance experience itself will be cramped, and hindered in its exercise, and cannot go on to perfection. Of processes of disease, and processes of reparation; of the great remedial agents, and the powers which belong to them, and their modes of acting, and modes of counteracting, and the methods of their application; of these some knowledge must be had prior to experience, and a greater knowledge must continually go along with it. Anatomy, and chemistry, and materia medica, are the keys to such knowledge. You have, therefore, a right to specify these as objects of study, to affirm that a competent knowledge of them is essential to the practice of physic, and to exact it.

The same necessity which the majority are under of practising their profession early, and of circumscribing their education within a short period, while it imposes some limit and selection of the things to be learnt, requires also a prudent method of teaching them.

Upon subjects, the proofs of which are contained in specimens and experiments presented to the eye, instruction can only be had by resorting to the places where such specimens or experiments are exhibited and explained. Most properly, therefore, are chemistry, and materia medica, and anatomy, taught in lecture-rooms, where the proofs are continually ready at every stage of the instruction, and the instruction itself consists in little else than exhibiting them in their proper place and order.

But are not medicine and surgery conversant with objects presented to the eye, and ought not they, in like manner, to be learnt by the contemplation of those objects? Yes.

But in the lecture-room these objects cannot be constantly present, so as to keep pace with the instruction, and be appealed to as proofs. Description, therefore, is made to supply their place, and become their substitute. Description, however, is a poor substitute; for it is absolutely unintelligible, except to those who have some acquaintance with the reality.

How, then, is medical and surgical instruction to be conducted, so as to make it

* Cowper's Task—Book vi.

answer its purpose more effectually? By keeping its real objects more, and as much as possible, in view: and as those objects cannot be brought to the student, the student must be brought to them. As he cannot see them in the lecture-room, he must seek them in the wards of the hospital, and *there* he must seek his instruction too, if he is to obtain any. And even *there* he will find it difficult enough to learn, with the objects before his eyes.

I have long doubted whether systematic courses of lectures on medicine and surgery ought to be considered as essential a part of professional education as they are, and whether the rigid attendance upon them which is required, does not stand in the way of other more indispensable means of obtaining knowledge; and whether they are not thus in danger of becoming a serious hindrance to the very purposes they are intended to promote.

You must go to the lecture-room, and see dissections, or perform them for yourselves, in order to learn anatomy: you must go to the lecture-room, and see experiments made, or make them yourselves, in order to learn chemistry.

And you must go the wards of an hospital in order to learn disease and its treatment; for there only you can see the sick man, and inquire his symptoms, and give the remedy, and note its effects, and witness its success or its failure.

In the wards of this vast hospital, there are five hundred experiments continually going on, day and night; even the great experiments of appeasing pain, of repairing injuries, of controlling disease, of averting death. They are under the direction and superintendence of us, the physicians and surgeons. But we cannot take you into a room apart, and tell you what they are. They are open to your inspection. Go and see what they import. Your time is short. You will soon be engaged with the like experiments yourselves, and upon your own responsibility; and then, be assured, you will soon perceive that an acquaintance with all their particularities and details is essential to their success in your hands.

From what I have thought it my duty to address to you upon the subject of education, let no man impute it to me that I desire to degrade physic from the rank which has hitherto been conceded to it among the learned professions.

I believe (what my own observation has convinced me of) that there is a mischief in putting forth a vast inventory of miscellaneous things, to be learnt by those whose time is hardly sufficient for mastering that knowledge which is obviously necessary for practical use. I believe also, that it would be absurd to demand from students generally, whatever might be the time and opportunities at their disposal, a perfect literary and philosophical education, in order to the exercise of our own or any other profession.

But although I do not enumerate Latin, and Greek, and French, and Italian, and German, and insist that all these you must know, yet I by all means recommend you to get as good a literary education as you can. Let each man learn as many languages, beside his own, as are within the easy research of his time, his opportunities, and his understanding. For every language will furnish him with a key to new stores of professional information. But to know a language, implies its ready use, not a dark apprehension of its words and phrases. Our own unassisted mother-tongue is a better way to be wise than this.

Again, although I do not enumerate every department of science that has obtained a name, and tell you it is indispensable that you should be conversant with all, yet I recommend you to get the best scientific education you can. Let each man, according to his time and opportunities, pursue that department, or those several departments, to which his mind inclines: but let him take care to feel his ground firmly established beneath his feet as he goes along. For *here* all half knowledge is no knowledge at all. Even homely common sense arrives at much safer conclusions in the things which belong to medicine, than any scientific principles half understood, and misapplied.

The medical men of England do, and will continue to keep pace with the age in which they live, however rapidly it may advance in the course of improvement. They need not be trained and sophisticated according to any compulsory discipline, in order to do so. By such accomplishments as are congenial with their professional studies, yet unforced and unpretended; by such moral qualities as, however they are engendered, are (I am persuaded) refined and exalted by their daily habits and avocations, their character has been, and always will be, esteemed honourable, and their influence great.

Yes! their character is honourable, and their influence great: and yet they are little conversant with the vulgar means of popular credit. They are singularly abstinent from all passionate interference with subjects of mere temporary interest. No sect, no party in politics, has reckoned many medical men among its clamorous advocates: but wherever there has been any association of good men for laudable ends—wherever any institution has sprung up having science or literature for its object—or any great scheme of benevolence

been designed or perfected—medical men have been always found among their first, their most zealous, and useful promoters.

Further, in England, there always have been among physicians those who have been upon an equality of education with the noblest and most learned of the land. They have been mixed with them at our public schools and universities: they have contended with them in honourable rivalry; and their minds have taken a congenial character from the similar studies of their youth. At length they have all separated to their several destinies for life. Some to the senate; some to the bar; some to the church; some to physic. These men, so educated, have ever afterwards looked with esteem upon each other, and each other's pursuits. And thus have the most illustrious men of every age, who could know nothing of physic as a profession, viewing it through those whom they have known engaged in it, been compelled to regard it with reverence and honour. In this way a credit has been derived to our common profession, in which every individual in every rank of it has partaken, when those whose good opinion is most coveted, have taken their estimate of physic and physicians from contemplating the characters of such men as Dr. Heberden and Sir George Baker.

What has been, will (I trust) ever continue to be. For I have a conservative jealousy of the rank due to my profession. I wish to see physicians still instituted in the same discipline, and still reared in fellowship and communion with the wisest and the best men; and that not for the sake of what is ornamental merely, and becoming to their character, but because I am persuaded that that discipline, which renders the mind most capacious of wisdom and most capacious of virtue, can hold the torch, and light the path, to the sublimest discoveries in every science.

It was the same discipline which contributed to form the mind of Newton and of Locke, of Harvey and of Sydenham.

ON DENTITION;

WITH AN

ATTEMPT TO EXHIBIT THE OCCASIONAL PRESENCE OF CERTAIN DISEASED CONDITIONS OF THE BODY,

As connected with its Irregular States.

By Dr. Ashburner.

[Continued from page 281.]

The gradations of partial spasm of the flexor muscles, loss of consciousness, clonic spasm, epilepsy, proceeding to stiffening, with continuation of spasm along the dorsal muscles, occurring in close coincidence with obstructed dentition, can leave no doubt of the dependance of the phenomena upon the progress of development.

Can we doubt that chorea and epilepsy are but more intense forms of the contractions which we know as convulsive spasms? — severer *degrees* of spasms?—a greater number of nerves being associated and involved. But the laws which regulate the production of spasm are so little understood, that we have no means of indicating the limits of the various *degrees* of severity. We know not what determines chorea, or when, or how, this disease glides into epilepsy. We know not how, in one case of chorea, great stammering exists, while in another there is no impediment to speech. The circumstances in the "*temporary derangement of organization*" of the nerves productive of these phenomena, it will perhaps require a long time to define. How is it that there are cases in which a complete loss of the power of speech takes place on recovery from an epileptic attack? When I was physician to the Parochial Infirmary of St. Pancras, in 1818, a fine young woman was in the workhouse, endowed with intelligence, and who was withal a docile and gentle creature, that had lost the power of speaking after recovery from an epileptic fit. Her endeavour to articulate ended always with a very melancholy repetition of "*amesame.*"

I was called to the groom of a gentleman residing in Davies-street. The man was early in the morning endeavouring to mount the box of a break, and with the reins in his hand fell down in a fit. He was lucky in having Mr. Parrott, of Mount-street, called to him directly; he was very properly treated, and consciousness soon returned; but it was found he was paralytic on the left side. He was freely bled and purged, and the power of his side was quite restored in a couple of days; but though he understood all that passed around him, he could answer only "yes" and "no" to questions put to him. I observed that he had a supernumerary incisor tooth, which appeared to crowd his mouth. Every tooth was tightly wedged against its neighbour. In looking into his mouth there was found to be sad decay of the

double teeth. I prevailed upon Mr. Parrott to remove seven of the remains of these, under the idea that they might be acting as irritants to the nerves of the jaw. At my next visit I was glad to find that the man was recovering the use of his speech. Several months afterwards I learned that he was quite well, and had had no recurrence of his fit.

Stammering, and the loss of the power of speech, are intimately allied to spasm. The *tardy* development of the power of speech may be considered as resulting from "a derangement of organization," an entanglement of developmental trains, quite analogous to the circumstances productive of these. That the mind should be clear and intelligent—that the expression of countenance in a child six years of age should indicate the possession of an understanding even beyond his years, and yet that he should never have spoken, although he was not deaf, appears strange. What entanglement of development was there that prevented the mind commanding the organs concerned in articulation? The jaws had always been too small for his teeth; they took a start in growth; the first permanent molares were cut; the spaces between his teeth became wider; the pressure was taken off from the dental nerves; the organs with which they were associated in inconvenience were free; and the boy soon learned to speak. I have seen several cases of tardy development of the power of speech in children who had, at three years of age, yet to cut the four last deciduous molares. An analogous case lately occurred in a niece of my own These views lead to important practice in the treatment of stammering.

Anormal dentition and its consequences form our present subject. There are many other circumstances producing irritations to nerves, and consequently operating as causes for the production of spasm, and of its various *forms* and *degrees*. Stammering sometimes exists as a part of the manifestation of a highly-nervous diathesis; but in many cases it is associated with a developmental error, and ceases when the erroneous trains have glided into those of harmony. I have known stammering commence at fourteen, and cease at eighteen years of age; and I have known it to begin at seven and cease at twenty-two.

A boy, eleven years old, was brought to me by a poor woman who had the charge of him for several years. She said that for the last eight months he had become more and more dull and stupid, and had acquired a habit of stammering. His tongue was getting very foul, and his breath was very offensive; and he started and moaned in his sleep, and perspired a good deal at night. She thought something was going to happen to the boy. In looking into his mouth an extraordinary state of arrangement of the teeth was seen. The incisors of the lower jaw were so placed, that the edges of the two lateral teeth nearly touched each other, while the anterior incisors were placed back, one overlapping the other at an angle. The anterior bicuspids were pushed in; the posterior bicuspids were not cut. The first molares were decayed, and behind them were two molares peeping through the gums. In the upper jaw there was more room, but the teeth were very crowded; and here the anterior bicuspids were both decayed; the posterior bicuspids were in their places; the first molares were decayed, and there was no appearance of second molares. The capsules of the canine teeth were prominent and turgid, but the teeth did not appear to be coming through. The boy in the course of three weeks had the six good-for-nothing teeth removed. I directed him to have alterative doses of blue pill, followed by senna tea every alternate day. In two months the boy's spirits and looks were quite altered, and he spoke without the slightest impediment.

The forms of spasmodic disorder are very various. May we not regard the sudden start during sleep as a spasmodic affection, differing certainly in *degree* and in duration from many spasms? What is the shivering or rigor of fever? May we not regard it as a miniature likeness of that general spasm we see in epilepsy?—a modified clonic spasm, modified by the existing condition of the patient?

Spasm accrues upon an irritation applied to nerves. These nerves may be derived from the surface of the body, and proceed through the brain to the internal structure of the intestines; or in the brain, or in their course, they may fall in with other nerves, with which they may associate themselves, going to perform their functions among other muscular organs of the body. Thus, *à priori*, who should say where a spasm would take place upon irritation applied to

nerves supplyiug some of the villi of the skin? Associated as the fifth pair is with the great sympathetic, how shall we tell where a spasm shall light from irritation applied to a dental nerve?

A lady of dark complexion, robust in health, residing in my neighbourhood, sent for me to see her splendid beautiful boy, nine months of age. It had never before had a day's ill health since it was born. The aspect of the child's countenance was such, that one could be sure there was a strangulated gut. At my request Mr. Carter, who was attending, has been obliging enough to send me a note of this child's symptoms. "On June 16th, 1831, about eleven o'clock in the morning, the infant appeared unwell, *heavy*, and *drowsy*, and unwilling to suck. The bowels had been opened in the course of the morning. On the right cheek there was an appearance of a sort of graze or mark, and the mother suspected that the nurse had let the infant fall; but the mark never manifested any further probability of such accident, nor were there any other appearances to shew that such had been the case. The child gradually grew worse, and I ordered it some castor oil. The bowels not being moved, a warm bath was directed, and one leech was applied to the belly. After using the bath a free quantity of blood passed from the bowels in the course of the night. No evacuation of fæces; but after this sanguineous discharge tenesmus came on, and progressively increasing in violence, frequently became exceedingly distressing, forcing away every now and then a free quantity of pure blood. The child had not cut a tooth; but I perceived the two lower incisors, and divided the gum and brought one through; but the child appearing to be in a hopeless state, the father would not allow me to divide the gum over the other tooth. This infant was ill about eighteen hours." When I arrived I found that Mr. Carter had exhausted the resources of our art; he left nothing for me to suggest. On opening the body, the striking circumstance that presented itself was an intus-susception of at least seven inches of the ileum through the cæcum into the colon. The gut was quite strangulated.

The spasm productive of intus-susception is by no means rare just before death, in cases of cerebral irritation from anormal development, both in infancy and adult age.

What relation is there between a spasmodic affection and a diseased state of the skin? The revulsion of a cutaneous affection is very apt to be attended by convulsive spasms. Dr. Jenner well observed, that no pimple or breaking out ever attacked the face without giving relief to the brain. A disease of the skin may be as much a manifestation of irritated brain or nerves, as a spasm; but the disease of the skin may be an arrangement to afford relief to the nervous system; the spasm is a sign of irritation without relief. When the relief arrives in the form of secretion upon the skin, the spasm ceases. Cutaneous diseases afford occupation for the extreme blood-vessels. By a secretion on the free surface of the body, relief is afforded to the internal parts. A revulsed eruption throws too abundant a duty upon the serous surfaces of the internal organs, and by a reflux of blood ends in an inflammation or a congestion of these parts. Such may be the termination of an eruption repelled, but it is not so necessarily. When the reflux of blood is upon the brain, the pressure irritates the nerves of the organ, and a spasmodic consequence may take place. But the conditions of all changes in the animal economy vary in *degree*. The change may be only to the amount of a blush upon some part of the brain, or perhaps the most minute increased secretion of the natural exudation upon the serous surface of the brain. This is not necessarily an inflammation, yet the change may proceed to an amount of irritation that shall be productive of spasm in that part of the body to which the nerve sends messengers. The brain may be in one of several very different conditions. Perhaps under one of these conditions the blush, or the effort at secretion, produces an inconvenience which is propagated over the brain. The message of such an inconvenience sent to the surface of the body is first a chill; the skin is corrugated; involuntarily the whole muscular apparatus moves slightly in the form of a rigor. Perhaps the whole body shakes, the back having felt the sense of a pouring of cold water. The extreme nerves respond; the villous organization under their control suffers a change of state; the surface becomes hot, and an abundant secretion of sweat relieves the brain of its load. No illustrations of the varieties in *degree* of the manifestations of irritated nervous cen-

tre are afforded more striking than those which are exhibited in different individuals during the course of anormal dentition. Diseases originate from a great variety of circumstances, but we have hitherto been too apt in searching for distinctions, to define the extreme boundaries of symptoms, and hence the gradations of shades that exist as characteristics of species have not been attended to with sufficient minuteness. Among children, especially during the progress of dentition, we observe phenomena to which, but for their transient nature, we should apply titles that would place them in some important part of the nosological schemes. As it is, we endeavour to catch the flying discomfort, and call it ephemera or febricula. We do not, however, care for the flush that, during sleep, suffuses the cheek of the infant, which has perhaps been preceded by a start. The little animal dreams; we trouble ourselves no more about it. Its consequences may not have been serious, but it has nevertheless been a *degree* of spasm—a *degree* of fever. Growth has been proceeding; some very trifling anormality has been present; we have observed its result. Harmony, the *norma* of nature, is reestablished; the inconvenience is gone; but had the anormality been greater, perhaps a serious consequence might have resulted. What is the disturbance in the course of the health of the infant that appears to be of the most trifling nature, and yet of sufficient importance to deserve a name? Is it a febricula? Writers in treating of infantile disorders, have the infantile fever, or infantile remittent fever, a *discomfort*, or a *disease*, according to circumstances—according to *degree*.

Whatever may be the infant's slightest ailment, convulsion is the severest; it is the crowning disease—the termination to its worst fevers—the goal to which most of its ailments, unchecked in their career, may run. Dr. John Clarke (Commentaries, &c. pp. 84, 85), tells us that "the symptoms indicating the approach of convulsions are often overlooked by parents and nurses; but upon an accurate inquiry made by a medical man, convulsions will most frequently be found to have been preceded by febrile symptoms, by drowsiness, by yawning, by sighing, by increased irritability, by impatience of sound and light, by some derangement of the process of digestion, or by some peculiarity of respiration." Dr. John Clarke has in a few touches painted the picture of the infantile remittent fever so accurately, and with such careful culling of authority described by Dr. Butter, in his treatise on the disease, What are its pathognomonic signs? All the ordinary conditions of fever belong to it. There are accelerated pulse, rigor, thirst, increased heat of skin, and perspiration; moreover, the generic character of remissions and exacerbations. Are there specific symptoms purely distinctive? There is a spiritless fretfulness and discontent. The expression of the countenance tells us of this. Indolence is a characteristic; a remarkable desire to pick, principally the nose—sometimes the lips and fingers—often even other objects; the breath is offensive; cough, or headache, or belly-ache, may be present; sickness or faintness; sighing; starting, more particularly in sleep; moaning in sleep; grating the teeth; sleeping often with the eyes half-open; the bowels either relaxed or very costive. These are among the distinguishing signs.

In many cases the specific distinctive symptoms are present, but there is no fever attached to them—at least none that is remarked.

Is the malady *then* to be named infantile remittent *fever?* Dr. Butter (Treatise on Infantile Remittent Fever, p. 12) says, "the colour often changes." Persons who labour under the distinctive signs that have been enumerated, without the presence of marked fever, often change colour; they take small parcels of the fever, without all the conditions essential to the febrile state. A cerebral irritation is sometimes evinced without any thirst; a flush of countenance preceding slight rigor and paleness of face; then a slight headache may follow. The pupils of the eyes occasionally suddenly dilate—perhaps only one pupil—then as suddenly contract. Perspiration is a part of fever; this is sometimes observed night after night, succeeding to no very remarkable heat of skin, but to a great drowsiness, which in itself is a proof of exacerbation, though the accelerated pulse of fever may be wanting. The *moaning*, *picking*, or *starting*, with any of these conditions, constitutes part and parcel of the disorder. Sometimes the ailment is slight in degree, or it may assume an acute form, with all the fire and anger of a hot fever. Sometimes it

is typhoid in its type. Whatever character may be assumed by this disorder, it is coincident with an irregular course of the development of some organ of the body; and commonly the irregular development is in the nutrient organs, and of these most commonly the teeth and jaws.

[To be continued.]

ON THE

STATE OF THE BLADDER IN PARAPLEGIA.

To the Editor of the Medical Gazette.

Sir,

The formidable consequences which ensue from the presence of ammonia in the urine, and from the affection of the bladder in paraplegia, render the pathology of these conditions a subject of deep interest. In paraplegia from injury to the spine, the state of the bladder is a source of great embarrassment, proving, as it does, the cause of premature death in some cases, and an insurmountable obstacle to recovery in others, in which, but for this, a reasonable hope of recovery might be entertained.

My attention has been recently called to these points by an ingenious essay, published in the Gazette of the 19th of October, in which Mr. Curling concludes, that the condition of the urine and of the bladder are the direct result of the paralysis. These opinions being admitted, it follows that the conditions in question cannot be obviated; and further, that they can only be relieved in so far as relief can be given to the paraplegia. My own experience has led to different views, which, as they hold out a more cheering prospect, may not be undeserving of consideration. As in all the cases witnessed by myself, in which ammonia has existed in the urine, there have been sufficient grounds for attributing its presence to the decomposition of the urine in the bladder, I have long been of opinion that its source is in this organ, and that it does not arrive ammoniacal from the kidney. Independently, indeed, of clinical evidence, there is extreme difficulty in supposing ammonia to be derived from the kidney, seeing that the kidney itself is not affected by it, while the bladder becomes most seriously diseased; and yet the organic sensibility of the mucous surface of the kidney is precisely similar to that of the bladder; both are adapted to the stimulus of healthy urine, and both would be equally affected by any foreign irritating ingredient. If, then, in cases of ammoniacal urine, the kidney remains sound while the bladder becomes diseased, it follows that the ammonia cannot be present in the urine coming from the kidney; and further, that the ammonia must be formed in the bladder. Supposing for a moment that disease was excited in the kidney, suppression of urine would ensue as a necessary result of the inflammation; but the urinal secretion is not arrested; a proof that the kidney is not involved, except it may be slightly and sympathetically.

Ammonia, when present in the urine under any circumstances, will excite disease of the mucous surface of the bladder of the same character as the disease which occurs in paraplegia*. Paraplegia, then, or paralysis, is not the necessary cause of the disease of the bladder.

Nor can I agree with Mr. Curling, that "the morbid state of the bladder so generally observed after injuries and diseases of the spine, causing paraplegia, results from the loss of the natural sensibility of its mucous surface." If the organic sensibility of the bladder was derived from the spinal nerves, then it is obvious that this sensibility may be paralysed by disease or injury to the spine; but as it proceeds from the nervous system of the organic life, namely, from the ganglionic system, the sensibility of which is not impaired in cases of paraplegia, it may be inferred that neither is there impairment of the organic sensibility of the bladder.

The bladder is supplied with nerves partly from the ganglionic system, partly from the spinal marow: from the ganglionic system it derives its organic sensibility, in common with the gall-bladder and viscera of the abdomen; and from the spinal marrow is derived its animal sensibility, or that nervous influence through which we are admonished to evacuate its contents. It is this animal sensibility which is impaired

* For some good observations on paraplegia, see the article 'Paralysis' in part xv. of the Cyclopædia of Practical Medicine.

in paraplegia—the calls of nature are no longer perceived, and micturition cannot take place. The first effect is retention of urine; the second its decomposition, and the evolution of ammonia; and the third, irritation, inflammation, and ulceration of the bladder, from the presence of the ammonia, to the stimulus of which the organic sensibility of the organ is not adapted.

It may be said that this cannot be the true explanation of the manner in which the vesical disease is induced, because, though the urine is drawn off regularly by the catheter, ammonia is still present, and the disease not mitigated. This leads to the particular point which it is my present object to elucidate.

Persons affected with paraplegia from injury or disease of the spine, lie invariably upon the back, a position in which the bladder cannot be with certainty emptied by the catheter: a part, then, of the decomposed urine, and consequently of the ammonia, is left behind, which keeps up and aggravates the disease, already excited, and produces the train of distressing symptoms which always oppose, and often prevent, the recovery of the patient.

In an adynamic fever patient, named Bellenger*, suspected to be labouring under retention of urine, the catheter was adroitly introduced twice, the patient lying upon his back. On the first occasion very little urine was drawn off; on the second, none. He died, and on dissection the bladder was found very much distended.

In the case of a young lady, also labouring under the adynamic fever, in whom the distention of the bladder was very great and manifest, a small quantity only of the urine could be drawn off while she lay on her back; by turning her on her side, it flowed more freely; but in order to empty the bladder, it was requisite to bring her to the edge of the bed, and turn her more over on the abdomen, by which means the object was accomplished. The same method was obliged to be had recourse to at each succeeding operation.

In a case of paraplegia, from injury to the spine, the urine for the first few days after the accident passed freely, when the catheter was introduced, and continued during this time to possess its natural characters, and the patient to be free from irritation of the bladder. At the end of this period, the urine no longer flowed freely, and the usual quantity could not be drawn off by the aid of pressure above the pubes. The dresser, to whom much credit is due, suspected that the small quantity of urine did not depend on a diminished secretion, but on the inefficiency of the means to evacuate the bladder; he therefore adapted a syringe to the extremity of the catheter, and was thus able to draw off, on every occasion, a considerable quantity after he had emptied the bladder, as far as was practicable, by pressure above the pubes.

From this amount of evidence, it may be inferred that the catheter, as usually employed, is not always competent to the emptying of the bladder, the patient lying upon the back; and that some additional means, as a syringe, is required.

The testimony of the last example leads to the inference, that so long as the bladder is evacuated at proper periods, the urine retains its natural characters, and the bladder remains free from disease.

If thus the disease of the bladder, in cases of paraplegia, can be referred to retention of part of the urine, from the insufficiency of the means used to draw it off, there is every reason to hope that by perfecting these means, the vesical disease might be guarded against and prevented. To this end, I should propose a catheter, furnished with an appropriate syringe, with which the bladder should be emptied as often as may be required: the catheter not to be left in the bladder, but to be introduced on every occasion with great care, and pressure above the pubes to be altogether avoided. Pressure above the pubes, for the purpose of expelling the urine, is a very objectionable proceeding: by it the bladder is injured against the extremity of the catheter, and ulceration and abscess sometimes induced. In the case of paraplegia above narrated, there were discovered on dissection no less than three ulcerative perforations and small abscesses in the anterior parts of the bladder, corresponding with the points to which the extremity of the catheter had been directed in endeavouring to draw off the urine: and injury scarcely less serious have I seen from the friction and irritation of the extremity of the catheter when left in the bladder.

The affection of the bladder, then, in cases of paraplegia, results from the loss

* See my Treatise on the Adynamic Fever, p. 236.

of the animal sensibility of the organ, and consequent retention and decomposition of the urine.

I shall conclude by the relation of an interesting case, which shews that the presence of ammonia in the urine is not derived from the kidney, but from decomposition of this fluid in the bladder.

Mrs. T., about fifty years of age, had been labouring under disease of the bladder, with ammoniacal urine, for seven or eight months, when she died from extreme suffering. An examination of the body was permitted, which I had the opportunity of witnessing, through the kindness of my friend Mr. Beaman.

With a view to discover the source of the ammonia, the urinary organs were carefully laid bare, and ligatures passed around the ureters, just below the pelves of the kidneys. The urine found in the pelves was tested with great accuracy, and shewed decided acid properties, turning litmus paper at once red, and not affecting turmeric paper. *Here, then, the urine was secreted acid from the kidneys, while it was voided ammoniacal from the bladder.*—I am, sir,

Your obedient servant,
JOHN BURNE, M.D.

24, Spring-Gardens,
Nov. 2, 1833.

ON THE

PROTECTIVE INFLUENCE OF VACCINATION.

To the Editor of the Medical Gazette.

SIR,

ONE of the grounds on which you undertake to advocate the interests of science and the profession, is evidently, and as you avow, the furthering of the interests of the community at large as a consequence: permit me, therefore, to call your attention to a point which may scarcely be noticeable in London. It is a point which, if it have not already begun, will, I fear, soon do so, to affect society as it has done in years past, and as cholera has just now. I refer to the few assertions that have been made, even by medical men, of the inefficacy of vaccination. In London, prejudices against it, even out of the profession, are almost gone, but the case is far otherwise in the country; and it is to be feared, that as soon as the defection of any one of our own body becomes generally known, the popular aversion will be abundantly, and perhaps almost warrantably, strengthened. If there be, therefore, any virtue in the practice, in the opinion of the majority of the profession, but which, from the inclination of popular prejudice, will with difficulty affect popular opinion, in comparison of a contrary one of a few, it seems but fair to look for the fullest details as to the causes and particulars of secession *.

Now, arguing with intelligent persons, merely from the original conditions of its progress towards establishment, the opposition it met with in the profession, the puerile disgust it met with out of the profession, and yet the ultimate conviction of its utility, notwithstanding the siftings and searchings which prejudice and ignorance would then give it, it is matter for astonishment, scarcely less than of regret, that any one (in the profession, at least) should now harbour a total disbelief after the many years it has continued in wide operation, and, with the one or two late exceptions, the universal allowance by professional men that it does at least *some* good, even though the existence of that good be limited to ten years. At no period, even when sanctioned and promoted by the whole faculty, and although encouraged and fostered by parliament in the formation of a National Establishment—at no period, even when at its acmé of reputation, has it by any means universally overcome the prejudices of the ill or uninformed and vulgar. Till now, on almost all hands has there been ascribed to vaccination at least a modifying and palliating power, which is by so much a protecting power; and many, many cases of variola must have been seen occurring in so mild a form, and so dissimilar to what we may often see it now a-days, but so especially dissimilar to what we read of it as an epidemic in years past, as to be wholly unaccountable and inexplicable, unless some virtue be allowed to the practice of vaccination. Seeing, then, that so almost general a faith has been built on its efficacy, and that there has been so comparatively general an adoption of the practice, it seems most

* See Mr. Brown, of Musselburgh, on the subject, Med. Gaz. xii. 317.

desirable to ascertain, as far as possible, the grounds on which those contradicting opinions are formed. This is the more desirable because of the still widely existing and deeply-rooted popular aversion; for as it did not yield to the common tone of the entire profession when faith was most complete, how much more likely is it to be extended if some of that body itself lose its confidence!

It is worthy of remark, that the most decided objections are offered by residents in the country, who, in all probability, derive their supplies of virus from town after delays of various kinds, &c. and perhaps old virus is sometimes used. This may be a ground of fallacy; the *mode* of vaccinating may be another. I will mention the plan which was adopted at the station of the National Establishment, in Raven-Row, Spitalfields, under the care of Mr. Addington, with whom I was apprenticed. I should think, during the five years I was with him, few less than 10,000 children passed under my hands; and the constant plan was one calculated, I think, to *ensure* success. Mondays and Thursdays were the appointed days. A patient presented, say, on Monday; two or three punctures (according to convenience from the size of the arm) Mr. A. made by a lancet charged with virus from an eighth day vesicle. On Thursday the child was again brought; if two out of the three, or if the two punctures had succeeded, I made one puncture in the other arm; but if only one of the former, or none had taken, *two* were made, or vaccination *de novo* was practised in the other arm. This plan originated, I believe, with Mr. Bryce, of Edinburgh. By the following Monday (being the eighth day), when they again presented themselves, the vesicles of *both* arms were expected to be equally ripe, though not equally large, although in the one arm they were eighth, and in the other, fourth day vesicles: if it were otherwise, vaccination was repeated according to these rules. If febrile irritation, or local inflammation, recurred during the fortnight, a purging powder, or liq. plumbi to the inflamed surface, were exhibited; and my impression is (for it is now twelve years since), that no case which was brought regularly by the parents was otherwise than satisfactory. On wet days, and at particular seasons, it sometimes happened that there was no eighth day vesicle in the room: a fourth day vesicle was then had recourse to, with (usually) equally satisfactory results; but if we were obliged to use the charged "points," or "glasses," it not unfrequently happened that complete failure ensued, though the virus with which they were charged was not more than four days old, and had been preserved with all due care. I cannot but think that the imperfection with which the practice is charged is to be attributed often to the mode of doing it, or to the materials; and one step towards obviating these, supposing them to exist, would be the establishment of other institutions, similar to that in London, in various other large towns throughout the kingdom.

As to the powers of vaccination as a complete specific, my opportunities and professional term of years, though exceeding the "ten," do not warrant my offering an opinion; but as a modifying and palliative remedy, I wonder how a doubt can arise on the subject. There is a curious and singular instance of its having *some* power mentioned at page 834 of your last volume; and I will now mention another (from written notes) equally conclusive. The subjects were children of a medical man now living in Wiltshire. Both were vaccinated soon after birth; the elder at five weeks; the younger at four months of age. In both the constitution was affected, and the pustules very fine. The elder was about six years old, and the younger about three, when in 1821 small-pox was very prevalent in the neighbourhood; and in a population of about 7000, four or five burials of children who had died of small-pox, took place for a time daily. The mother of these two became alarmed, and prevailed on the father to *inoculate* them, which he did. But in neither of them was the constitution in any way affected, although pustules arose in their arms which afforded virus sufficiently effectual to produce extensive variolous eruption and disease in the children of many paupers who were inoculated from them. The gentleman himself vaccinated and inoculated his own, as well as the children of the paupers.

I think, sir, if you knew the extent to which the prejudice prevails among the

uninformed in the country, you would not be slow to seek the grounds of aversion in the influential because informed.

I am, sir,
Your obedient servant,
GROVE BERRY.

Harrogate, Nov. 14, 1833.

GENERAL PRACTITIONERS.

To the Editor of the Medical Gazette.

SIR,

AT the present period, when so much discussion is going on respecting medical reform, and when it appears probable that some legislative enactment will be carried into effect upon the subject, it appears necessary that the general practitioner should carefully consider how far his interests are involved in the proposed change;—and as it must appear obvious to every one, that whatever tends to raise him in the estimation of the public and add to his respectability, must prove equally beneficial to both, it then becomes a question how this most desirable end can best be attained?

At present, a large portion of the emolument, and in many cases the only remuneration he receives, is a profit upon medicines; which is often reluctantly paid, from an impression that such profit is unreasonable; losing sight altogether of the professional skill and trouble of the medical man, at the same time he is degraded into the rank of a trader, and loses much of that respect and consideration which it is so important he should enjoy, besides engendering in the mind of the patient the unworthy suspicion that he is giving more medicine than is really requisite, for the dishonest purpose of increasing his own gain; a feeling utterly destructive of the perfect confidence which ought to subsist between them, and which has had a powerful influence in reducing the profession to its present degraded state.

The remedy for all this must be so apparent to every one, that the surprise is that it has not long ago been applied. Let the general practitioner receive a moderate fee for each visit, and have nothing to do with supplying his patients with medicine; let the prescriber and the compounder of medicines be perfectly distinct, and let it be made penal for either party to trespass upon the province of the other. This plan, I am convinced, would be equally acceptable to the public and grateful to the feelings of the practitioner; and at the same time place the profession upon a higher footing, decidedly separating professional skill from a traffic in drugs. The patient would soon learn more duly to appreciate that for which he would then directly pay, consultations would become more frequent, and the physician would equally participate in the advantages derived from this better state of things.

Another advantage attending the above-proposed change, would be doing away with the necessity of apprenticeships; the time appropriated to which, it is generally admitted, might be much more profitably spent than it now is chiefly in the compounding of medicines—an employment, it must be confessed, which is not calculated to improve a young man's manners as a gentleman, or to impress his mind with very just ideas of the dignity of his profession; to say nothing of the loss of so many precious years, when he ought to be laying in a store of classic and polite literature. The public naturally estimate a man's professional attainments, of which they cannot judge, by the standard of his general knowledge, of which they are capable of judging: it therefore becomes necessary that a medical man should be an accomplished scholar, to enable him to obtain the full confidence of, and to exercise a proper control over his patients, particularly in the higher ranks of life. It is not, however, my intention at present to follow the young student through the course of education he ought to pursue, but to suggest to the general practitioner what I conceive would place him in a much more favourable position with the public, and one much more consonant with the feelings of a member of a liberal and enlightened profession.

Having always considered you as foremost in the ranks to promote the true interests, and uphold the respectability of the profession, I trust you will oblige me by allowing these suggestions a place in your excellent journal, if you think them calculated to answer that purpose.—I am, sir,

Your obedient servant,
EDWARD GREENHOW.

North Shields, Nov. 13, 1833.

SUGGESTIONS REGARDING MEDICAL REFORM.

To the Editor of the Medical Gazette.

Sir,

I beg leave to avail myself of your obliging invitation to address you again on the subject of Medical Reform. In my first letter I mentioned several defects in the present organization and working of the medical profession, and glanced at some of the remedies. Allow me on this occasion to consider the subject more fully. The general direction of Reforms must in all cases be pretty nearly the same; viz. to render the institutions to be reformed more efficient to their proper ends; and in the case of the medical profession, 1. To provide more fully and surely for supplying the public with able medical and surgical practitioners, and with "pharmacopolites," or medicine venders of complete ability. 2. To furnish materials of proved capacity for medical commissions, senates of health, &c. in aid of the legislature and magistracy. 3. To promote medical science and art in general.

Now the general means required to secure these ends are, 1. Liberal, general, and professional education prescribed for all. 2. Unequivocal proofs required of practical skill at least, before admission to practice. 3. Representative government. The last of these means I would especially insist on as of paramount importance, and altogether indispensable. The tendency of the two former means to secure learning and skill is obvious; but the importance of responsible organic machinery for the attainment of these ends is, though equally certain, yet less obvious. Laws are mere paragraphs and sentences, except as rules of action of living functionaries or authorities. Of course, if the executive machinery of a law be ill contrived, if the officers be ill selected, or be irresponsible or but partially and indirectly responsible, then that law is but imperfectly enforced, or is perverted, or suffered to lie dormant altogether. Now the representative government alone involves reasonable security for official industry and good faith, because it alone can safely concede publicity of proceedings. I have no hesitation in saying, that continuing as we are in other respects, but with publicity of proceedings, secured to us for a check on selfish interests and passions, and for a stimulus to public spirited feelings, and for a lash for the back of intrigue and ignorance, we should have rapid and extensive improvement in our profession, and, before the lapse of many years, a complete reform of the defects and abuses at present so justly complained of; while, without such publicity, no improvement can be permanent. Under the surveillance of a free press, how much fewer of the selfish feelings, narrow views, antiquated prejudices, unjust projects, and silly arguments known to be expressed at the tables of our councils, would gain utterance at all, or if uttered, would as now be followed by discreditable and mischievous votes? Every man that makes an unjust proposal is not a rogue, nor every maker of a silly speech, a fool. If the governing sections of the profession spoke and acted thus, under the public eye, the distinction would soon be very obvious between the capable and incapable; the latter of whom would be dismissed from authority, and the former, secured in virtue by vigilant watching representative government; this alone would furnish permanent security for official responsibility, and appears to me the grand desideratum of the medical profession. If the governing trustees of the profession were immediately responsible to the medical and general public, which, by the establishment of representative governments, and not else, they would be, advantage would arise in three ways, inevitably and certainly: 1. Existing good laws would be better enforced, 2. Existing bad laws would be sooner repealed; and, 3. Defects of whatever kind, whether in medical education, professional police, or professional civil rights and immunities, would be sooner remedied. So entirely paramount do I consider the representative principle—so great do I know to be its purifying, and regenerating, and invigorating quality—that I should be disposed to wish that the legislature should for the present decline all other proposed improvements of our institutions; and I am confirmed in this opinion by the notorious ignorance and indifference of the non-professional public of and to every thing connected with medicine, and by the apprehension that owing to that ignorance partly, and partly to the pressure of more momentous questions, medical reform, if not brought forward in the simplest and

most compact shape, will not obtain a full and patient hearing in parliament, and that consequently the decision of the legislature will be biassed and vitiated by the secret suggestions and solicitations of corporation emissaries, and other agents of the holy alliance of indolence that loathes change, and ignorance that cannot see its justice and necessity, and selfish interest that dreads it; and several weighty reasons of a prudential kind lead me to put forward representative government as our present great desideratum, in addition to the consideration of its involving immediately or remotely, directly or by sure consequence, almost all other desirable reforms. 1. Anti-reformers cannot deny its justice; 2. Nor reformers differ about its expediency; 3. Nor a reformed parliament misunderstand its nature, or hesitate to grant it, if the profession demand it.

The present system of medical government is essentially that of the by-gone schedule A., and of the vanishing systems of select vestries and close corporations, with differences of nomenclature, and of ostensible machinery; they agree in the great principles of official self-election and irresponsibility. The governing bodies of the surgical section of the profession, and of the society of Apothecaries, are undisguisedly and palpably self-elected. The mass of members, or licentiates of the halls of Lincoln's-Inn-fields and Blackfriars are excluded, by the charters, from all share in the government of these corporations. The College of Physicians is, I believe, not legally a perfectly close corporation, like the others; yet practically it has long been so. It consists of two classes of physicians: the mass M.D.'s, of Oxford and Cambridge, who have been by by-laws, whose legality by the way is doubtful (Willcock) entitled, exclusively and of right to demand an examination, &c. as candidates for incorporation; and a minority, perhaps a tithe of the whole, graduates of Universities, not English, who have been, in consideration of eminence in practice, or other reasons, recommended for incorporation into the society by the President, and have thus owed their elevation to the favour of that officer. Now, setting aside the minority, who, without "having accomplished all things for their form," have by presidential grace been at once empowered to advocate with effect, and yet prevented from at all, so far as I have been able to learn, advocating the cause of the excluded mass, their sometime fellow-sufferers; and turning to the preponderant portion of the College, we find that it represents no section of the profession. It is quoad Oxford and Cambridge, a pure democracy, rejecting in practice no applicants from those quarters; but is at the same time a pure, or nearly pure, aristocratic oligarchy, quoad all other schools, whose graduates it rejects *en masse*, as unworthy, if not specially favoured, of even an examination, as a step to incorporation at some future, however remote, period of probation.

Being then legally free to reject at discretion their own kindred of Oxford and Cambridge (Willcock), they are to all practical purposes as much self-elected as either of the councils of Lincoln's-Inn-fields or Blackfriars. Now will taxation, will even legislation relative to matters not financial, be longer tolerated by aggrieved commonalties, or supported by a reformed House of Commons, without the guidance and control of the representative principle? What decent reason of justice or expediency can be offered why A. and B. and C. should be erected into keepers of their brethren? How are the initial letters more worthy than the rest of the alphabet? the guardians wiser than the wards? Are the commonalties, rabbles, or the oligarchists, the *elite* of the profession, "the wisest, virtuousest, discreetest, best?"

A great advantage in pressing for the representative principle, above all, and even in lieu of all other improvements, would be, that there could be amongst genuine reformers no second opinion about its expediency. It is plain that its introduction into medical government must necessarily soon be followed by every other reform to which the profession alone is competent, without aid from the legislature or magistracy, and a moment's thought will shew any impartial inquirer that responsible medical legislatures and executives would afford the best guarantees, as well as most efficient instruments, for the future attainment of every other: but of this again fully hereafter. Thus much I may say in this place, that I am convinced that if the legislature, after placing the commonalties on a footing of equality with the now-governing members, would give to each division of the profession

the right of choosing its own trustees, or councilers, or governors, by whatever name known, and would, after such an emancipation of the masses, leave professional interests to battle it out amongst themselves, the result would be most satisfactory to every disinterested friend of medicine; the defects of medical education would be speedily and completely removed; professional police would be greatly amended; while our civil rights and immunities would be much better attended to, and, with parliamentary aid when necessary, speedily fortified where weak, and enlarged where narrow, and supplied where wanting.

My next task will be to explain what I understand by representative government, and to describe how it might most easily be instituted; and then to shew in detail how all the principal grievances in the medical profession would be speedily and surely removed, without immediate further interference by parliament than would be implied by emancipating the commonalties, and founding medical government on publicity of proceediug and official responsibility, *alias*, on the representative principle. With your leave I shall resume the subject in my next letter.—I am, sir,

Your obliged servant,

Civis Medicus.

London, Nov. 15, 1833.

EFFICACY OF IODINE IN CUTANEOUS DISEASE.

To the Editor of the Medical Gazette.

Sir,

I am aware that it is the fashion to extol beyond their merits those remedies that have lately been derived from the wonderful improvement of our chemical knowledge. I trust I shall not be accused of having imbibed a similar feeling with regard to iodine, which has received so many encomiums from all classes of practitioners. I wish only to present your readers with a few cases strongly illustrative of the efficacy of this remedy in some inveterate cases of cutaneous disease, and allow them to draw their own inferences on the value or inutility of this modern remedial agent.—I am, sir,

Your obedient servant,

C

Middlesex Hospital, Nov. 15, 1833.

Case I. was an instance of well-marked sycosis menti, in a man 38 years of age, and who had been afflicted with it three years and a half.

This disease is allowed by all who have directed their attention to cutaneous affections to be most obstinate in cure, and often defying the most approved remedies.

The patient was admitted into the Middlesex Hospital, under Dr. Wilson, in December, 1832.

Over the whole chin, above and below, were numerous vesicles, containing a clear fluid; some had burst, and discharged a thin yellow ichorous matter, which had incrusted on several parts, forming very annoying scabs; there was great heat and pain about the part, with some headache; otherwise, he felt in good health. He was ordered to be cupped to the neck for his head ache, and then purged with compound jalap powder. In two days he complained of discharge from the urethra, and some scalding in passing his urine. He was similarly affected when the eruption first commenced, but it went off without any remedy. He now commenced applying to the chin, night and morning, the following ointment:—

Iodinii ϑss.; Potassæ Hydriod. 3ss. tere simul; adde Adipis ℥j. ft. Ungt.

This treatment was resolutely persevered in, and he left the hospital in February, quite well, both in regard to his eruption and urethral discharge.

Case II.—Henry Gibbs, æt. 14, admitted under Dr. Wilson, March 12, 1833, with an eruption covering the whole scalp, face, and neck: it commences with small pustules, which, on giving way, leave a large, firm incrustation. This had existed one week. After taking cold, he felt very poorly, and went to bed: on rising in the morning, he observed the eruption.

Ordered to be bled to ℥vj. when he fainted.—To take the Dec. Dulcam. c. Liq. Potass. ♏xv. ter.—A Linseed poultice to the head and neck.

This treatment was pursued till the 20th, when the eruption, not at all diminishing, he was again ordered

V. S. ad ℥x.; and to use the same form of Iodine ointment to the eruptions.

He now rapidly got rid of the old incrustations, no fresh ones sprang up, and

he was discharged cured in the early part of the following month.

This patient was seen a very short time since, and continues perfectly well.

Whilst using the iodine ointment he complained (as many others have done) of soreness of throat, and tenderness on pressure of the submaxillary glands.

Case III. was unusually severe and obstinate. The patient, a female, had been under medical treatment ever since the disease had first afflicted her, and nothing had completely eradicated the affection: she had got partially well, and returned to her occupation as servant, but was soon obliged to give up work from the annoyance she experienced, and a dread those about had of becoming contaminated. She was 17 years of age, and had suffered since her infancy from a pustular eruption over both hands, and wrists, and ears. Her general health was good when admitted, under Dr. Wilson, in March 1833. The treatment was simple, and the success complete: she immediately applied, night and morning, the usual iodine ointment, and took occasionally an aperient. This latter remedy did not form a systematic part of the treatment, as it was seldom required.

She became perfectly free from any eruption in two weeks from the application of the ointment, and was able to leave the hospital quite cured the first week in April. She has since obtained a situation as nurse-maid; and although the hands are constantly exposed, she remains in good health, without any appearance of fresh pustules breaking out.

Case IV.—J. Peters, a man of colour, was admitted under Dr. Wilson, July 16, suffering from an extensive tubercular eruption of pustules around and under the chin and neck; it was so extremely painful and annoying, that he had long since left his employment, and had had various remedies applied to it without effect. The disease commenced a month previously, with pain at the epigastrium, and loss of appetite. His general health is good. Was ordered to apply a poultice to the part, and to be bled to ℥xvj.; to take an aperient every other morning.

On the 29th he was directed to use the same form of iodine ointment, the eruption now beginning to spread, and becoming more annoying, though less painful. He steadily improved, and was perfectly free from any complaint about the parts on the 12th August. He was discharged the following week, well.

ON THE EFFICACY OF

THE SECALE CORNUTUM IN HÆMORRHAGES & LEUCORRHŒA;

AND ON ITS

EFFECTS IN GONORRHŒA.

By G. Negri, M.D.

Since the action of the secale cornutum on the uterine system attracted the particular attention of obstetric practitioners, and has been successfully employed in cases of long-protracted labours, Dr. Atlee of Philadelphia, Professor Bigieschi and Dr. Balardini in Italy, as well as Dr. Guillemont in France, have recommended it as the most efficient remedy to arrest menorrhagia, when occasioned by want of uterine contraction after labour. Dr. Shallcross recommended it also in those uterine hæmorrhages which originate from a partial detachment of the placenta; whilst Professor Dewees expressed his belief that it might be efficacious in hæmorrhages in general. In the London Medical and Physical Journal for May 1829, a case of menorrhagia, cured by that remedy after three months trial, was related by Dr. Marshall Hall, who found it also beneficial in leucorrhœa.

From all these facts, Dr. Spajrani, who had already successfully employed the ergot of rye in several instances of leucorrhœa, was induced to try its efficacy in other uterine hæmorrhages not immediately connected with parturition. After the favourable result of his first experiments, he extended the use of the ergot of rye to any other hæmorrhages proceeding from different mucous texture, both in male and female.

The result of Dr. Spajrani's observations on this subject was published in the fasciculus for March, 1830, of Omodei's *Annali Universali di Medicina e Chirurgia*. In that interesting publication are related eight cases of menorrhagia; four cases of what he calls "*uterine congestion;*" two of epistaxis; five of hæmoptysis; and two of hæma-

turia. Another publication on the same subject appeared in the following number for May and June, 1830, by Dr. Pignacia. It contains two cases of menorrhagia, and two of hæmoptysis, successfully treated with the secale cornutum; and in the fasciculus for February and March, 1831, of the same Italian periodical, two other papers were published, one by Dr. Gabini, and the other by Dr. Bazzoni. The first contains three cases of menorrhagia, one of hæmatemesis, one of pneumorrhagia, and two of epistaxis, one of which occurred in a woman affected with acute scurvy, and accompanied with all the other symptoms of what has been called "purpura hæmorrhagica." Dr. Bazzoni's publication contains an account of eight cases of leucorrhœa treated with the ergot of rye, in which it afforded great benefit in arresting the white discharge, even in instances considered of an incurable nature, from organic malignant disease of the womb.

We have since read an account of an "admirable Essay" on the use of Ergot of Rye in Menorrhæa, published in the *Bulletin Général de Therapeutique*, by MM. Trousseaux et Maisoneurse. A case of hæmoptoe, in a man, cured by the same medicine, by Dr. Lanyon, was published in the Lancet for April 13th, 1833; and another of menorrhagia, in a woman, aged 60, by Mr. Bright; together with an article, by Mr. H. A. O'Slea, on the anti-hæmorrhagic effects of the ergot of rye on the male, in which he states "that in corroboration of what was published by Dr. Lanyon, he (Mr. O'Slea) employed that medicine with the same view for the last two years, with *invariable success*;" and concludes, that "the adoption of this practice arose from reading an article on the same subject in a number of the Lancet, somewhen in the year 1831." In all this time we had ourselves a favourable opportunity of trying the efficacy of the secale cornutum in different instances of hæmorrhages and leucorrhœa; and with a view of ascertaining its *modus operandi*, we tried it, we think for the first time, in gonorrhœa, both in female and male.

In bringing before this society the result of our experience on this subject, it is not intended to proclaim the secale cornutum an infallible remedy, or as a certain specific against those diseases, and that nothing else may be required but to exhibit indiscriminately large and frequently repeated doses of it to obtain a speedy cure. It would then happen of the ergot of rye given for those complaints, what did happen before of it, when administered in cases of protracted labour: in the hands of some practitioners it will succeed, while in the hands of others it will fail, or be even injurious.

About the method of administering the secale cornutum, Dr. Spajrani laid down the following remarks:—"To obtain a speedy and favourable effect from this remedy, it must be of the best quality, otherwise it will fail." [This fact was evidently proved in one of the cases related in his paper.] "The dose of the remedy must be generous, often and regularly repeated. If the hæmorrhage be very violent, it must be given from six to ten grains even every ten minutes, till the hæmorrhage ceases; if not so violent, every two hours, or at long intervals." He ordered it generally in powder, but he used it also in pills and in decoction.

When we began to employ the ergot of rye, having no personal experience of its therapeutical properties, we used it in smaller doses than those recommended by Dr. Spajrani, and we are perfectly convinced that in some instances it failed, or its efficacy was retarded, for this very reason.

The effects on the general system, which followed the exhibition of the secale cornutum, have not been constant or the same in different individuals who took it; but never of an alarming character. The greater number of patients were complaining of giddiness and headache, which followed in general only the first doses of the remedy, and did not last long. Few were complaining of sickness; and others of a general sense of prostration "all over, from the head to the top of the fingers and toes." Some women, who had menorrhagia and leucorrhœa, complained of pains round the hypogastric region and loins, and some even expressed it as "a sense of bearing down of the womb." A woman, who had a chronic ulcer on her right foot, complained of excessive pain in it since she began to take the secale, and others complained of pains along the thighs and legs. But others, on the contrary, felt no inconvenience at all from larger and long-continued doses of the remedy, although the drug was the

same, and manifested its beneficial agency on the disease for which it was used. Only in two or three cases of menorrhagia, the loss of blood and the pains round the hypogastric region and loins were considerably increased by the action of the remedy on the uterine system. Therefore, in instances of this kind, we bled our patients first, and then gave the secale with the best success. On this point of practice we followed the suggestion of Dr. Bazzoni, who stated in his paper that, "in hæmorrhages, the secale cornutum may be useful, whether they are active or passive, primary or secondary; but its proper indication is in their passive state: although, (says he,) it may be of some service in the opposite state, still it will be more prudent to have it preceded by bloodletting." For the same reason, if the strength of the patient would not allow any further loss of blood, we employed moderate doses of emetic when it was necessary to allay the over-excited action of the heart and arterial system; or we used mild, opening medicines, where an habitual state of costiveness might have been considered as the principal cause of irritation and local congestion of the uterine system: these simple means succeeded sometimes in arresting the hæmorrhage, without any want of other therapeutical agents.

Of its peculiar *modus operandi* we shall speak after having exposed the facts which enabled us to draw some conclusion, as far as it was possible, on this subject. We shall now proceed to relate the most important instances of hæmorrhage, which we treated with the secale cornutum.

Case I.—*Menorrhagia.*

Ann Beteux, aged 35, married, was admitted into St. John Dispensary the 19th of January, 1832. She had been ill a long time with menorrhagia, and had been under different treatment till the 9th of April, but without any permanent relief. On the 16th, the hæmorrhage having appeared again, we thought proper to try, for the first time, the effect of the secale cornutum in this case, and five grains of the powder were ordered to be taken three times a day. The hæmorrhage from this time gradually diminished till the 10th of the following May, when it entirely ceased.

May 14th.—She feels a great deal better, and has no more pain in the loins and groins. The powders were continued twice a day till the 24th, and the patient was afterwards discharged cured.

Case II.—*Menorrhagia.*

Ann Marshall, aged 30, married, was admitted on the 14th of May, 1832, labouring under a very profuse menorrhagia; her pulse was quick and sharp; had great pains round the loins and hypogastric region, which was very tender. She was ordered to be bled to fourteen ounces; and saline aperient powders were prescribed.

17th.—The pains round the loins and groins are better; her pulse is softer, but the hæmorrhage is still going on with great violence. Five grains of the secale to be taken three times a day.

21st.—She feels a great deal better. Had no hæmorrhage since the 19th, namely, two days after she began to take the secale. The same powder was repeated, to be taken twice a day, and she was discharged the following day of attendance.

Case III.—*Hæmorrhage from the Rectum, following suppression of the Catamenia.*

Hannah Paton, aged 21, single, was admitted on the 12th of July, 1832. Eight months ago felt quite well. Has not been regular the preceding month, but had since pain in the groins and loins, with great general debility. These symptoms were followed by hæmorrhage from the rectum, which continued at intervals up to this day. Had previously taken some opening medicine without any relief.

5 grs. of the Secale to be taken every four hours.

16th.—Since she has begun to take the powders finds the hæmorrhage much abated. Pergat.

23d.—Has had no hæmorrhage since the 20th. The menses returned on the 21st; and she feels now quite comfortable.

The powders were repeated, to be taken occasionally.

She was afterwards discharged.

Case IV.—*Excessive Menstruation.*

Mary Fore, aged 40, married, was admitted on the 19th July, 1832. She has had for the last eighteen months a very profuse bloody discharge at the menstrual periods, which never till lately

continued longer than five days. She was regular about three weeks ago, when the hæmorrhage reappeared with great violence, and continued unabated for the last seventeen days. Has pain in her back and groins, and complains of general debility. Her pulse was very quick and empty.

Five grains of the Secale to be taken every three or four hours.

July 23d.—She feels much better. After taking three powders, she had violent headache and giddiness, which kept on increasing as she took them, and felt a kind of contraction, or as she expressed it, "a sense of bearing down of the womb." She continued the powders up to the night of the 20th. The hæmorrhage entirely ceased on the morning of the same day. After omitting the powders, her head got better. The secale was ordered in pills, and in smaller doses, only to be taken twice a day. As she was complaining of great general debility, a little camphor mixture, with a small dose of the sulphate of quinine, was ordered to be taken occasionally in the course of the day.

30th.—She is going on better: had no more hæmorrhage. Her bowels being costive, opening pills were ordered, and to have a little blister behind her neck, to relieve her head. She was discharged the following day of attendance.

Case V.—*Menorrhagia following Leucorrhœa.*

Sarah Scanterbury, aged 47, married, was admitted on the 26th July, 1832. Has had leucorrhœa as long as she can recollect. Has miscarried nine times: her last pregnancy was about three years ago. A month since was unwell, and the menstrual discharge was unusually profuse; it returned again in a fortnight, and it has re-appeared this morning, (July 26th), this being the third time within five weeks. She feels weak, and has pain in her groin and back: no medicine has been previously taken. Five grains of the secale to be taken every four hours.

30th.—The bloody discharge continued from Thursday the 26th, till Saturday the 28th, when it entirely ceased. It has not returned, and she feels now much better. The secale was suspended, and only some cream of tartar ordered to be taken as an imperial drink.

Aug. 2d.—She is going on very well. The same saline aperient was ordered to be taken occasionally, and she was discharged the following day of attendance.

Case VI.—*Hæmatemesis.*

Elizabeth Pilcher, aged 10, in June, 1832, was in good health. Her illness was caused through having been violently pressed round the waist by a man, who frightened her very much. This produced pain in the right hypochondrium, extending towards the epigastric region, and was followed by a sense of sickness at first, then vomiting of the contents of the stomach, and afterwards of pure blood. She has continued in this state up to the day of her admission, the 30th of July, 1832. If pressure is made over the right hypochondrium, which has been very tender since the commencement of her illness, the hæmorrhage ensues immediately. She was not under our care till the 10th of the following month of September, but had not found any relief from the usual means which were employed, from the time of her admission. We thought this a good case to try the effect of the secale; therefore, after having used some mild opening medicine, on the 13th of September three grains of the secale were ordered to be taken three times a day. This remedy was repeated the 17th and 20th of the same month, but without producing any effect in arresting the hæmorrhage; it was then discontinued, and other means were adopted. The greatest benefit was obtained by the sulphate of iron mixed with kino. On the 28th of February, 1833, she was discharged, having been more than a month quite free from any hæmorrhage.

She remained well for about ten days, when having accidentally struck with violence her right side against a chair, the pain in the right hypochondrium, and vomiting of blood, returned. She came back, in consequence, to St. John's Dispensary, on the 7th of March, 1833, and was admitted under our care. Various remedies were employed, which were found beneficial on the former occasion, but without obtaining any good effect on the disease. We then thought proper to have recourse again to the secale cornutum, but administered in larger and more frequent doses. Therefore, on the 28th of March, we ordered six grains of the secale to be given every third or second hour. After having taken six

powders, the sickness, the vomiting of blood, and the pain in the right hypochondrium, left her. She continued taking them at longer intervals for several days, without giddiness or any other unpleasant symptom arising from the medicine. The pulse appeared stronger, and her countenance more animated and florid than before. She omitted once taking the powders for a short time, and the sensation of sickness, and the pain in her side, returned, but were very soon relieved by having recourse to the same remedy. The powders were continued, but only night and morning, from the first to the 14th of April. On the fifteenth day they were entirely omitted, as our patient felt herself quite well.

19th.—She was discharged cured, and has not yet returned.

Case VII.—As another instance of hæmatemesis, we shall relate, with Dr. Macmichael's permission, one which occurred in the Middlesex Hospital.

Lucy Haselton, aged 21, single, was admitted into the Middlesex Hospital on the 21st of Sept. 1830, under Dr. Macmichael's care, King's-ward. She was complaining principally of great tenderness over the right hypochondrium, extending towards the epigastrium: she had sickness, with vomiting of a dark fluid, mixed with blood, partly coagulated. Local bleeding, and different astringent remedies were employed, without success. On the 27th of Nov. Dr. Macmichael was kind enough to prescribe for her, at our suggestion, the following powder:

℞. Pulv. Secalis Cornuti. q. vj. ter die sumend.

Sept. 29th.—The patient was better, and the same remedy was continued.

30th.—The hæmorrhage having ceased, and the pain over her right side greatly diminished, she was discharged, and only kept as an out-patient. The powder was ordered to be taken only twice a day.

Dec. 2d.—She stated she had not seen any more blood, and was going on well.

Case VIII.—*Hæmatemesis, with enlarged Spleen.*

Eliza M'Culloch, æt. 10, admitted on the 3d of October, 1833. About four years ago she had hæmorrhage, which was considered to come from the lungs, and has continued at intervals ever since. The blood is generally of a red colour, and is never mixed with food. The hæmorrhage is usually preceded by pain, and uneasiness at the *scrobiculus cordis*, and nausea: the blood comes up in a way different from expectoration, by an effort similar to vomiting; she has afterwards a very unpleasant taste in her mouth. The fluid brought up in this way has been repeatedly brought to us. Being collected in a glass vessel, had more the appearance of a bloody lymph than of pure blood: it remained quite fluid, and had a peculiar disagreeable odour. The quantity emitted each time has never been very considerable. She had pain on pressure being made at the *scrobiculus cordis*, and if at the right extremity of the stomach, the pain went across to the left. At the left hypochondriac region there is great prominence, and she complains of frequent pain there. She has often rigors at night, and afterwards perspires very much. She never had a cough or expectoration for any length of time. She is subject to violent fits of passion. Her illness has not weakened her much; her appetite is good, and she sleeps well. Her complexion is flushed. Although she had been admitted on the 30th Oct. it was only on the 17th we ordered about three grains of the secale cornutum to be taken every second hour.

21st.—The vomiting of blood is diminished, and she did not suffer any inconvenience from the regular use of the medicine. Pergat.

24th.—The vomiting of blood still continues as much as before.

℞. Pulv. Secalis Cornuti. gr. vj. tertia quaque hora sumend.

Nov. 4th.—She has not brought up any blood for the last three days. The powders were then repeated, to be taken only night and morning.

11th.—She has no more hæmorrhage, although she has not taken any more of the powders for the last few days. She feels quite well; and having carefully examined the left hypochondrium, under her dress, no more prominence could be felt or seen on that side. She was then discharged cured.

Case IX.—*Hæmorrhage from the Rectum.*

Mary Smith, aged 30, was admitted on the 29th April, 1833. Had then a

chronic diarrhœa, and afterwards hæmorrhage from the rectum took place after each motion; this has continued for a fortnight, and she thinks to have passed more than a table-spoonful of clear blood at each stool. The diarrhœa was very much reduced, principally under the use of small doses of Hydrargyrium cum creta, and Pulv. Ipecacuanhæ. On the 17th June, having, for the first time, complained of this hæmorrhage, and being on this day more copious than usual, we thought proper to try in this case the effect of the ergot of rye: six grains of the powder were then ordered to be taken every three hours.

18th.—The patient was a great deal better. She told us that from the time she first began to take the medicine, she had no more hæmorrhage, although she had two motions this morning. The medicine was continued, but at longer intervals. On the 27th June she was discharged cured.

Case X.—*Epistaxis.*

Sarah Hodges, æt. 62, of a leucophlegmatic habit, was admitted on the 19th August, 1833. She was seized with epistaxis on Thursday evening, three days previous to her admission. On the following evening (Friday), at about eight o'clock, P.M., the hæmorrhage returned, and continued for half an hour, when she applied to a surgeon, who put plugs into the anterior nares, but the bleeding continued through the posterior the whole of the night, more or less. In the following morning (Saturday) she was bled from the arm to about a pint, and took some opening medicine. The hæmorrhage, however, continued at intervals all that day and throughout the night, but not so violently as before. On Sunday morning the hæmorrhage, after having ceased for a little while, returned about the same hour of the preceding day, and continued more or less all day; and in the evening it was very much increased, and went on bleeding at intervals almost all the night. On Monday morning (Aug. 19), about noon, the bleeding came on very freely: she thinks she lost about half a pint of blood in a quarter of an hour.

When we saw her, it was about one o'clock, P.M.; at which time the hæmorrhage was very active. She was very pale, and weak; her pulse very quick, and small. Six grains of the secale cornutum were ordered to be given immediately (one o'clock, P.M.), and to be repeated every quarter of an hour. She was directed to sit down in the apothecary's room to watch the result.

At a quarter-past one the hæmorrhage was very much abated; she was then complaining of being very faint. A second dose was given; and five minutes after it—viz. twenty minutes from the first exhibition of the remedy—the hæmorrhage had entirely ceased. Another powder was given at half-past one, and a fourth at two o'clock. She was then sent home, and directed to take one powder only every hour, till six o'clock in the evening; and if no hæmorrhage re-appeared, to take one of them every three hours.

August 20th.—We visited the patient at her own house, and found her lying down comfortably. She stated that she had been free from hæmorrhage since she took the second dose of the remedy at the Dispensary, and now feels only very weak. The powders were continued at longer intervals.

22d.—She was well, and had seen only a few drops of blood the same day we visited her at home, after having pinched her nose, but ceased directly after taking one of the powders. No remedy was ordered. She returned on the 19th September, when, being quite well, she was discharged cured.

[This case was witnessed by our colleagues, Dr. Ryan, Mr. Jenkins, and Mr. Nettlefod, the surgeon-apothecary of our institution, who gave the medicine himself to the patient, and watched over the case.]

Case XI.—*Hæmoptoe.*

Jeremiah Sams, æt. 20, cabinet-maker. Four months previously, he had a cough, with a slight expectoration in the morning, which was generally of a greenish colour. Six weeks ago he observed the expectoration to be tinged with blood: this continued for a week. Then he began to bring up about a tea-spoonful of blood every morning, and continued so for the last two weeks. The hæmorrhage was neither preceded or attended with any considerable aggravation of his cough, and only occurred in the morning. His complexion is very pale. He had also some difficulty of breathing when making any exertion. He was admitted on the 3d of October, 1833, and as there was not present any symptom indicating the existence of an in-

flammatory action requiring more active means, six grains of the secale cornutum were prescribed, to be taken three times a day.

October 7th.—After having taken his powders for two days the hæmorrhage diminished, as well as the cough. Has had no giddiness, or any other extraordinary symptom, from taking his powders. The remedy was repeated, and soon after the hæmorrhage ceased.

17th.—Had a slight return of the hæmorrhage for two or three days, but only once in the morning. Pergat.

24.—The hæmorrhage ceased entirely from the 21st. The cough and the difficulty of breathing is a great deal less. Pergat.

28th.—On the 26th, he saw again a very little tinge of blood in his spittle. His cough is a great deal better. Pergat.

November 1st.—Has had no more hæmorrhage; his cough is now very slight. No remedy.

[For the two following cases we are particularly indebted to our friend, Mr. E. Nettlefod, the surgeon-apothecary of our Dispensary; who had also the kindness to take down the history of almost all the preceding cases.]

Case XII.—*Hæmoptysis.*

Mrs. Clarkson, æt. 33, married, a private patient. Has not been in good health the last five years, since she ruptured a vessel in her chest. After this accident she had a cough, which, together with the hæmorrhage from the chest, and sometimes from the nose, has continued up to the present time (April 4, 1833), with but slight intermission: indeed, for the last fortnight, has had hæmorrhage from the chest every day. She thinks must have lost this morning about half a tea-cupful of blood. Her cough is very troublesome; has great palpitation of the heart, and giddiness.

April 4th.—Six grains of the ergot of rye were ordered to be taken every second hour.

5th. Rested well last night. This morning her pulse is quick, but soft; the cough less, and expectorates freely. Has had no hæmorrhage since taking the above powders, of which she has had sixteen. The giddiness is less, and she feels much relieved.

6th.—Has had no hæmorrhage; her cough is better; pulse full, quick, and rather sharp; tongue white. She is feverish; has pain in her side, and this is usually followed by the bleeding, which she thinks will soon come on.

Continue the powders every hour.

7th.—The pain in the side left her in the night; after which she slept well. Has had no hæmorrhage; feels very weak; pulse soft, and moderately quick; is not giddy. The hæmorrhage has never left her so long before for a considerable time. Her cough, she thinks, is certainly better, and has experienced much relief from the medicine.

Continue the powders every second hour.

11th.—The hæmorrhage has not returned. Her pulse is soft, and a great deal less frequent than before she took the secale; the palpitation of the heart was also less troublesome, and her cough is much easier now than before.

Twelve grains of the Secale Cornutum to be taken every second hour.

22d.—She has had no hæmorrhage since taking the secale, and its increased dose has produced no unpleasant symptoms. She finds it relieves her cough considerably; but as it is accompanied with hectic fever, there appears to be but little hope of her being cured of it. The secale has certainly abated the hæmorrhage, which is all that in such a case as this could be expected; and as the patient desires, it is continued.

No return of the hæmorrhage up to the present day (April 29th). She died some time afterwards, from consumption, but had never any return of the hæmorrhage.

Case XIII.—*Hæmoptysis, with Leucorrhœa.*

Mary Smith, æt. 39, widow: has not been in good health for the last three or four years. The catamenia has not appeared for the last ten months, and had leucorrhœa ever since, with pains in the loins and over the abdomen, and frequently the globus hystericus. She had a cough last winter, which soon left her, and does not remember having had any before. From this time has been free from any complaint in her chest, till the last five weeks, when she has had a cough ever since, which at times distressed her very much.

Three weeks ago, after coughing violently, she spit blood, and continued to do so for two days. When the hæmorrhage ceased, she had pain and giddi-

ness in her head. A week afterwards, the spitting of blood returned, and went on for two days: she thinks to have lost altogether a good-sized tea-cupful.

She did not spit blood again till last Friday (April 26th), viz. at the end of another week; and for the whole of that day she was constantly doing so. Her cough was very violent, her chest painful, her breathing quick and difficult: was very thirsty; she felt hot and feverish, and the leucorrhœa was in the meantime very profuse.

On the following morning (April 27th), after having taken some castor-oil, six grains of the secale cornutum were ordered to be taken every hour. Two days afterwards, she was admitted to St. John's Dispensary.

29th.—After taking six powders her chest became easier; her cough was much relieved, and the spitting of blood ceased, as well as the leucorrhœa. She has now taken sixteen of the powders, and has had neither hæmorrhage or leucorrhœa since 11 P.M. of last Saturday (April 27th), after having taken six doses of the secale. Her cough is now very slight; pulse 77, easily compressible; bowels open. Since taking this medicine she has had less giddiness, but feels very weak and faint. Continue the powders.

May 2d.—Has had neither spitting of blood or leucorrhœa. Her chest feels easy, and coughs but little. Pulse 70, soft; tongue clean and moist; bowels open; is not thirsty; skin cool, and soft. Has had a little pain in the back and loins, but very slight compared to what she had before. She finds herself much stronger. Her foot is less painful. (She has had an ulcer on the right foot for more than a year, which circumstance she did not mention at first, which has pained her excessively since she began to take the secale.)

5th.—No hæmoptysis or leucorrhœa since April 27th. Her cough is troublesome sometimes, but it is much better than it was. Pulse 65, soft and small. She has now taken 54 six-grain doses of the secale. Since she has found herself so much better, she has taken it only three times a-day. The giddiness has quite left her, and she is now free from pain. Pergat.

9th.—As she feels so much better, and has been now a considerable time without either hæmorrhage or leucorrhœa, the secale is discontinued, and was afterwards discharged cured *.

[For the two following cases I am indebted to my colleague, Dr. Ryan.]

CASE XIV. — *Hæmorrhage from the Gum, in consequence of the extraction of a Tooth.*

A delicate-looking man, aged 32, a carpenter, had the left canine tooth of the upper-jaw extracted, and the operation was followed by profuse hæmorrhage. He applied at one of the large hospitals for relief, and was desired to press a piece of sponge into the socket of the tooth. He did so, without any benefit. He then applied to Mr. Packer, surgeon, at Hoxton, who recommended him to me. On examination, I found a coagulum, about the size of a large walnut, over the alveolar process, but there was still some oozing of blood.

I ordered him the secale cornutum, in the manner prescribed at the St. John's Dispensary, desired him not to remove the coagulum, and wrote to his surgeon, that in the event of further hæmorrhage, to plug the alveolar process with a piece of cork; but should this fail, Ruspine's styptic; or to apply the actual cautery; and, finally, that the carotid ought to be tied sooner than allow the man to die. Mr. Packer called on me next day, to express his astonishment at the success of the secale, as it had completely arrested the flow of blood; and he since informed me that no return took place. I was aware that Dr. Spajrani had removed the coagulum in a case of epistaxis, and encouraged the hæmorrhage, and stopped the bleeding with the secale cornutum; but I did not consider myself justified in adopting his practice, as the man had lost a great deal of blood, and was very much debilitated.

CASE XV.—*Menorrhagia, followed by Metritis.*

Mrs. Davis, æt. 23, of middle stature, married for two years; has had no family. She was admitted a patient at St. John's Dispensary, September 18, 1833, under the care of Dr. Ryan. She suffered from dysmenorœa before her marriage, which was very much aggravated subsequent to her change of life.

* I have been attending this patient at her own house, for a bad leg, and she has had no return of the hæmorrhage.—Nov. 1, 1833.

At present she suffers from menorrhagia, accompanied by excessive pain and discharge of coagula. She was ordered a drachm of secale cornutum divided into ten powders; one to be taken three times a day. In three days the uterine discharge had ceased, but well-marked metritis supervened, and was removed by the ordinary treatment—venesection, leeching, purgation, &c. Mr. Nettlefold saw this case also, and attended the patient at her own residence.

These are the most remarkable instances of hæmorrhage successfully arrested by the use of the secale cornutum, which we thought proper to communicate to the Society. We had, indeed, several other cases of menorrhagia, but we considered them less interesting than those of hæmorrhage from other mucous textures unconnected with the uterine system. The above facts appeared to us of such a practical importance as to deserve the particular attention of the medical profession. Perhaps they might be found not so numerous as to justify any general deduction from them. But if the facts already published by other practitioners, and in other countries, should be taken into consideration, it will be found that the anti-hæmorrhagic property of the ergot of rye has been sufficiently established to induce others to repeat the same experiments; and, *if judiciously employed*, we dare to say with a similar result.

ON THE EFFICACY OF THE SECALE CORNUTUM IN LEUCORRHŒA.

On the employment of the *secale cornutum*, and on its efficacy in leucorrhœa, we shall limit ourselves to some general remarks, which are the result of our experience on this subject, without entering into any detail of the singular cases which occurred under our observation.

Although the secale cornutum will be found one of the most valuable remedies in the simple form of leucorrhœa, even of a very long standing, and which have resisted every other means, still its efficacy on this kind of diseases is not so rapid as in hæmorrhages. This would have been almost expected, as a matter of course, from the more chronic character of the former complaint; therefore, we found it more convenient, and, we may say, even more safe, to give it in small doses, as five or six grains, two or three times a day, rather than in larger and more frequently repeated ones. Thus the remedy may be continued for a long period without any inconvenience, and with regular advantage. In leucorrhœa, as well as in menorrhagia, we must always remember that the ergot of rye has also a peculiar power over the fibrous texture of the womb; and that pains and spasmodic contractions of this organ may be induced, and then symptoms of *metritis*, and even an increased discharge, may eventually take place. Then it is of the *utmost importance*, in leucorrhœa also, *to allay any state of inflammation, or of local irritation*, by those therapeutical means which may be required by the particular symptoms of each case, before we have recourse to the secale cornutum. We found, in practising, that some patients could not take at first any dose of this remedy without severe pains being induced in the uterine system, when after having used other remedies for a certain time they could take the secale again without the least inconvenience, but, on the contrary, with a decided and progressive advantage on their general state of health.

In one of these patients the *os uteri* was partially open and indurated, and very tender on the left side of its margin. When the finger pressed over this part acute pains were excited, darting from that part to the right iliac region. We used in this case the extract of *conium* with the sulphate of iron, with great benefit; and after this morbid sensibility was subdued, we gave again the secale cornutum for the remaining leucorrhœa, with decided benefit, and without any more inconvenience, although continued for a long time. We have lately seen this patient, and her general state of health has wonderfully improved; she feels a great deal stronger, and the white discharge is almost entirely gone: we confidently expect to see her in a short time cured by the ergot of rye, which now she only takes twice a-day. Out of ten cases of leucorrhœa, of which we kept regular notes, the ergot of rye has failed in three: but in all probability, that happened more from want of experience in the judicious employment of the remedy, than from its inefficacy. Of these three unsuccessful cases, two were cured afterwards by other remedies; but one had never been permanently well either by the ergot of rye or any other means,

employed for a long time both by ourselves and several other practitioners. In this singular case, the secale cornutum appeared to have induced once menorrhagia; after which the patient was better from the white discharge for a little while. Amongst the other things, we tried repeatedly the injection of nitrate of silver, as recommended by Dr. Jewel, but without any good effect; and as it appeared to this gentleman very extraordinary, we recommended her to the Doctor himself, but we do not know the result.

The secale cornutum has also been successfully employed in leucorrhœa by our colleagues, at the St. John's Dispensary; and our friend, Dr. Ryan, has even used it in private practice, with the greatest advantage.

[To be concluded in our next.]

ANALYSES AND NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Surgical Observations on the Restoration of the Nose; and on the Removal of Polypi and other Tumors from the Nostrils; from the German of Dr. Dieffenbach of Berlin; with the History and Physiology of Rhinoplastic Operations, Notes, and additional Cases. By JOHN STEVENSON BUSHNAN, Fellow of the Linnæan Society, &c. &c.

IN a very interesting introductory chapter, Mr. Bushnan gives us an historical sketch of the various operations that have been successfully tried for the restoration of lost or mutilated parts; nor does he omit to notice the energies displayed by nature in the regeneration of tissues and organs, not only amongst the lowest classes of the animal kingdom, where such an occurrence is most frequent, but amongst the higher, where we find eyes, lower jaws, tails, and extremities, renewed in a remarkable manner. Even in man, examples of the reproduction of whole organs are not wanting, as in the case of the nails and glans penis; after the removal of the cervix uteri also, a new *os tincæ*, more or less perfectly formed, is sometimes met with; and after the excision of a joint, a new joint, with all its complicated appurtenances, in greater or less perfection, has been observed. Hunter's and Duhamel's experiments of transferring the spurs of cocks to their combs, where they have thriven and attained a considerable longitude, are well known; and numerous instances are on record, in which the separated parts of one organized being have been made to unite with the parts of another. Mr. Carpue, in his book on artificial noses, relates a story, on the authority of a friend, of a Swedish gentleman who, when a boy, exchanged a portion of the skin of his arm with a school-fellow, as a token of indelible affection. This was certainly a curious illustration of the ancient phrase, " skin for skin;" but unfortunately for the credit of Swedish surgery, the fact is not borne out by modern and more trustworthy experience. The indefatigable and enterprising Dieffenbach tells us that he never succeeded in reuniting portions of skin which were once entirely separated from the body. " The number of my attempts," says he, " was very considerable, as I availed myself of the opportunity which almost every surgical operation I performed afforded. For instance, when removing tumors, I generally took away a portion of the skin with them, which I always re-applied to the wound; but on removing the bandages, I generally found it either putrid or of a whitish appearance, or black, or blue, or dissolved into pus, with the dry epidermis sticking to the linen."

Mr. Bushnan's account of the nose operation is full and satisfactory: of course the ingenuity of the Hindostanee surgeons, who have had the art among them from time immemorial, is not forgotten in it; nor are the merits of Gaspar Tagliacozzi passed over in silence. This learned professor, who has been vulgarly and erroneously accounted the inventor of the operation in Europe, is vindicated from some charges which have rather exposed his memory to ridicule. The well-known lines upon him in Hudibras are familiar to every body; but they are founded in error and ignorance. Tagliacozzi describes the *skin* of the arm, and not the *muscle*, as the proper material for supplying a new nose—in which practice he essentially differs from all his predecessors; and his explicit rejection of the flesh of other

persons in his operations, might have saved him from the ridicule to which he has long been subjected.

The precepts of Dieffenbach relative to the best modes of repairing or restoring noses, are as minute and clear as they are ingenious; nor can they be too highly appreciated, when it is known that they are available in many instances where the patient (to use the words of Dieffenbach himself), is in such a state that at his presence children cry and dogs bark. We shall give his account of the mode of operating, which he recommends where it is the object to raise up and reconstruct a sunken nose. In such cases it may happen that little or no vestige of the organ remains; "the bones, cartilage, and other parts of the nose are altogether destroyed, presenting a frightful hole or cavity, several inches in circumference, down which we look as down a crater." M. Dieffenbach's method chiefly consists in dividing into portions the remains (if any) of the old organ, raising them from the cavity, making needful additions, and securing them by appropriate fastenings. The chief details of this method are the following:—

"The patient being seated on a chair, behind which an assistant holds the head firmly against his breast, the operator thrusts a small pointed scalpel into the left side of the cavity before the sunken point of the nose, and by an incision proceeding obliquely upwards, cuts through the soft parts as far as the nasal process of the frontal bone. A similar incision is then made on the right side. The strip of integuments between these incisions, which consists of the point and dorsum of the old nose, is twice as broad below as above, where it is attached to the skin of the forehead. At the lower end it is connected with the upper lip only by the shrunken cutaneous portion of the septum. If this be destroyed, and in order to gain room, the flap may at once be raised and reflected. The inverted tip of the nose, which forms the extreme point of the flap, is next to be pressed outwards, and the shortened septum is to be elongated by an incision, made on each side of it, in the upper lip.

"The next step is the formation of the sides of the nose. The first incision is most conveniently made on the right side of the face; the knife is inserted down to the bone, a few lines below the termination of the incision by which the dorsum of the nose was raised; it is then to be carried slowly through the soft parts obliquely downwards, on a line where the base of the nose passes into the integuments of the cheek—a small addition from the latter being advantageous. A similar incision is then to be made on the left side.

"Lastly, two semi-circular incisions are to be made through the soft parts, along the natural—though in the present instance entirely obliterated—place of insertion of the alæ nasi. Both the left and right of these incisions pass round the lower part of the sunken alæ, outwards and upwards, meeting the incisions at the sides of the nose. The lower edges of these flaps are now partially free; they are to be laid hold of with the forceps, and cautiously separated from the bones, and then with their alæ, situated at their lower part, are to be drawn out of the cavity and reflected upwards. The flaps extend to the skin of the forehead, as they approach which they become narrower.

"The subsequent step of the operation, and a very necessary one, is the separation of the margins of the incisions in the integuments of the cheeks, bordering on the large cavity in the face, to the distance of a fourth or a third of an inch. It is by means of this separation that a firm attachment is procured for the skin, forming the sides of the new nose, with the facial bones at its base, and consequently the nose is prevented from again sinking down by a sort of slipping outwards of its sides, especially at the upper portion. This mutual approximation of the sides, which will be again spoken of, is principally accomplished by means of two long needles, which are passed through the edges of the integuments of the face, under the base of the nose, and fixed, in a way to be afterwards described, to a long splint of stiff leather placed on each side of the nose, so as to squeeze it outwards by pressing on its base, and thus to push it prominently forward.

"Now begins the re-construction of the nose. If the surgeon were to bring the flaps in contact with the surface of the incised wounds, the nose certainly would not again sink, but it would be very flat. Their edges must therefore be cut in such a manner as to promote the upright position of the nose. For this purpose the inner part of the two edges of the dorsal flap is to be removed with a pair of sharp scissars, without

comprehending in the incision any of the cuticle of its outer surface; so that the long thin strip thus cut away is of a triangular form. The reason for this is obvious. The dorsum of the nose acquires in consequence the properties of the key-stone of an arch; that is, it is between, and rests on the edges of the external flaps. In order to prevent the strong inclination of the lateral flaps and alæ nasi inwards, and to raise them up like walls, their external edges too must be cut—not, however, on the inner angle of the edge, as in the instance of the dorsal flap, but on the outer or epidermal angle, from which about a straw's breadth is to be removed. On the straight lateral edges this is done with a pair of straight scissars, on the edges of the alæ with a pair of scissars curved on their surface.

"We now proceed to the most agreeable part of the operation—the union of the flaps with one another, and with the skin of the cheeks. In the first place, the edges of the dorsal flap, after the careful removal of the blood, are united with the upper or inner edges of the lateral flaps. The best mode of accomplishing this is by the twisted suture. Three needles are sufficient for each of the upper seams; and they must be placed at proper distances from each other; the two lowest should be at the sides of the tip of the nose. The union is more complete when another needle is introduced into the outermost edge of each ala. Finally, a ligature is to be passed through the edges of that part of the upper lip from which the septum was taken. This ligature, therefore, lies behind the septum; and while it brings the edges of the breach in the lip closely together, it contributes to push the strip of integuments forward, and to prevent it from sinking back into its former cavity. All the needles, after being properly furnished with ligatures, should be cut off close to the thread. If the columna is altogether wanting, it is to be formed at a later period, after the parts are fully healed, by cutting a small strip of skin out of the upper lip, and bringing it in contact with the tip of the nose, where a raw surface is previously to be made for its reception.

"One can scarcely imagine what firmness the nose has now acquired, although it still remains unattached at its lower part. The union of the nose with each of the basement edges of the cheek is effected by four simple knotted sutures, which are introduced by fine semicircular sharp needles. The two uppermost serve to fasten the lateral surfaces; the two lower to fix the alæ to the upper lip. The last and only remaining painful part of the operation which the patient has to undergo, is the insertion of two long needles under the nose, and through the detached edges of the integuments of the cheek, as has already been alluded to. The best method of effecting this, and the most convenient to the operator, is to thrust them from the left towards the right side; the distance from the point at which the pin enters to that at which it comes out, is, upon an average, about one inch. Before they are introduced a strip of stiff leather, from a third to half an inch in breadth, and from one and a half to two inches long, is laid on each side of the nose, forming two splints, which press the sides of the nose together, keeping them in their proper situation. Each of these compressing pieces of leather has two small holes through which the needles are to be passed, on the left side *before*, but on the right side *after*, they have transfixed the nose. The heads of the needles on the left side prevent them from slipping through the leather; which is also prevented on the right side and at the base of the nose, which at the same time is squeezed inwards to the requisite degree, by twisting the projecting points of the needles spirally with a pair of pliers.

"In conclusion, the nose, especially its cavities, must be carefully cleaned by injections of tepid water; and quills wrapped round with oiled charpie, are to be introduced into the nostrils."

For the account of the after-treatment, which is indeed simple though scientific, we are obliged to refer to the volume itself, where numerous interesting cases, with appropriate graphic illustrations, will be found to render the subject still more satisfactory. And we particularly recommend to the reader's notice the general remarks of Dieffenbach, in his last chapter, where, among other things, he modestly observes, that "what has hitherto been effected in this branch of science can be regarded only as the stealthy and uncertain steps of one endeavouring to attain, with a very inadequate knowledge of the means, an object with which he is unacquainted. Those who believe that, because some few noses have been formed, the art is complete, and the science brought to its

utmost state of perfection, are indeed deceived. My experience, and the increased knowledge which every attempt brings with it, convinces me how little we absolutely do know, and that what we have yet done falls as far short of perfection as the rude and untutored chiselling of the tyro does of the masterpieces of Canova."

In an appendix Mr. Bushman gives an account of two operations, indicative of the success which has attended Rhinoplastics in Scotland—Mr. Lizars's case, which was operated on in the year 1831, and one that occurred in Mr. Bushman's own practice, which he candidly relates, though it was far from satisfactory.

We should add, that the volume is enriched with a considerable number of valuable notes by the translator; and that the pathological and descriptive remarks of Mr. Bushman throughout are highly creditable to him, and display much learning and research.

MEDICAL GAZETTE.

Saturday, December 7, 1833.

THE UNIQUE MEDICAL FACULTY.

"Nous avons changé tout cela, et nous faisons maintenant la médecine d'une methode toute nouvelle."

The wisest king that ever lived remarked, "that there was nothing new under the sun!" But, then, it is quite certain that Solomon never was a member of the Westminster Medical Society; and we are satisfied that could his disembodied spirit have returned to this world, and could he have found an earthly tabernacle to contain him at one of their late meetings, (we think it would have been somewhat difficult), he would have owned himself defeated by one of the resolutions then and there proposed, and have regretted that his proverbs had ever been handed down to deceive mankind. To be sure, he might plead that it was not altogether new to wish to overturn and destroy a learned profession, by mixing together, in one mass, all orders of medical men, separating them neither by their acquirements, their education, or their proficiency in those parts of medicine or surgery to which they have devoted their time and study; and might urge with some plausibility that the "ONE Faculty" of Dr. James Somerville, as fully explained by the comments of our contemporary, was but a prototype of the "Collegium" of Mr. Wakley. To be sure, in a neighbouring country—the model of all that is worthy of imitation—such an attempt was never exactly made, even during the moments of the reign of the purest liberty and equality; but it was certainly proposed to begin with the subject instead of its professors, and to revolutionize science itself, before introducing equality in the mental powers of those who studied it, or rating at an equal worldly value the man who can just acquire the minimum of knowledge required by law, with the more perfect mind,—such as that of the man who could discover how to arrest, and almost extirpate a disease, to which thousands and tens of thousands had annually fallen victims. Marat's plan of revolutionizing science, by beginning with overturning the Newtonian Philosophy, was not more preposterous in theory than the proposed "assimilation of the whole profession" is, in a practical point of view.

Really the whole scheme is too ludicrous for any attempt at serious refutation. If such an idea could for a moment hypothetically be considered as feasible, we would ask, what would be the plan of education required by this unique and indivisible "Faculty?" We presume that some education — that which is diffused so widely through all classes of his Majesty's subjects—that which is considered necessary even for one, who in the distribution of society is doomed to live by his daily labour—for him to whom

> "The modest wants of every day,
> The toil of every day supplies,"

—will not be considered altogether un-

necessary for the members of a profession which our forefathers (poor benighted souls!) considered to require all the learning—all the acquirements—of which the human mind is capable. But many of the wants of society may be ministered to without that extent of cultivation which is necessary to form a man of the profoundest science; and are they who cannot afford to procure the attendance of the most learned to be denied the kindly offices of our art? or is he who has attained a less degree of knowledge, though one calculated to make him useful,—is he to be excluded from living by what skill he may have acquired, though it may fit him neither for the improvement of the art, nor the discovery of new methods of cure? What, then, is to be the standard of education proposed by the ONE FACULTY? To be just, as all grades are to be abolished, (and it is on this point that the absurdity of the scheme turns,) it must be the minimum quantity of acquirement necessary for the public use. And what would be the consequence? The annihilation of all spirit of emulation, and the substitution of a direct premium to ignorance and idleness. Will men work hard, spend years of toil within the wards of hospitals, at the bed-side of patients, and court the midnight lamp, to perfect their knowledge in particular departments;—will they do this to be no more honoured before their fellow-men—no higher authorities in their profession than those who from having had fewer opportunities, and from having earlier had recourse to practice as a source of income, have had their attention less concentrated, and thus with a useful knowledge of the whole, have not so perfect an acquaintance with the parts? Much there may be—much there is—to remedy in our medical institutions, to fit them for the increased numbers over whom they ought to preside, for the changes in political feeling, and for the daily improvements in knowledge; but these visionaries in reform, forgetful of the age in which they live, and blind to the demands which opulence and refinement engender, would carry us back to the early stages of society, when, still rude, it required but one class of practitioners for its wants; and when medical science had not branched out into its numerous ramifications, many of which require the study of a life. Are there not even at present, in the general divisions of physician and surgeon—which those acting as Wakley's tools (perhaps unconsciously to themselves) propose to abolish—various subdivisions;—are there not, among the first, men who, from their peculiar pursuits, are best adapted to advise on functional, and others on organic disease; and among surgeons men of high reputation as operators, but who are less known as physiologists or pathologists—nay, some who restrict their powers to lucrative but isolated branches of practice? If the wants of society create such distinctions, will not the attempt to generalize, and confound all under one common appellation, be absolutely futile—will it not justly be regarded as the effort of the unsuccessful in our profession to lower others, rather than make the nobler effort—to elevate themselves?

Little indeed must be his knowledge of mankind who thinks that any institution can exist in this country, where the gradations of society are so various, which does not in some degree contemplate the wants of those gradations. Abolish all Colleges and municipal regulations entirely, and open a free trade in medicine: this is intelligible. The highest educated would still bring his wares to market; competition would excite industry; and though we think, in our art especially (which is not judged of by the intellect of society as easily as if their passions and infirmities were not concerned), such a measure would not be attended with advantage; it would

be certainly useful, compared with the Faculty, the *compulsory equalizer* of intellect, the multitudinous ruler of all professors of the healing art.

If the resolution which is announced as this evening to be brought forward at the Westminster Society, receive the interpretation put upon it by our radical contemporary, viz. as comprehending an entire levelling of all grades and distinctions in medicine—we say, if a measure so pregnant with discord among the members of the profession be proposed to Parliament, we prognosticate the utter discomfiture even of those measures which might be of real service. If we were enemies to all reform, this would have been the measure we should have proposed: but to imagine, that on a subject of such immense importance, any one who takes the lead in a committee for such inquiry should not consult — should not be compelled to consult — all authorities in the profession, and sift the real state of the case, is as preposterous—no, not that, but nearly as preposterous—as the proposal for "one Faculty," which is to blot out all distinctions in medicine.

We have a contemporary,—"erigite aures," ye lovers of scurrility and baseness —we have a contemporary whose attacks upon all that is elevated, illustrious, and successful in our profession, would have gained him universal execration, but that the said attacks have been sometimes excused under favour of their supposed wit. A "crassa Minerva" covers a multitude of sins. Even this excuse is gone: what shall we say of the anecdote of the worthy representative of the Tower Hamlets, in the last lucubration of our most witty friend? The said learned member — who, if we are rightly informed, is a man of great legal acuteness—would surely not have refused his assent to any thing which undermined existing institutions, merely because it was of a subversive nature? But this out-heroded Herod; the scholar and the gentleman could not make even his political bias influence him in this instance; and the exclamation, "Are you mad?—have you lost your wits?" which burst from him, though commented on as a singular specimen of mental hallucination, would form no bad motto, and might be inscribed in letters of brass over the Hall intended for the use of *the Faculty*, in which all faculties are to be made alike.

We admire equally the sagacity of some of those who have spoken in favour of this measure, and the tact of the commentator who by the insertion of an anecdote so practically annihilates his own conclusions.

ABOLISHING DISTINCTIONS.

The following is the anecdote above alluded to, and is taken from the pages of our contemporary, by whom it is adduced to prove, not the absurdity of attempting to annihilate existing distinctions in medicine by law, but in order to shew the perversity and stupidity of some people in not at once seeing its eligibility:—

"There are still a few gentlemen existing who do not see how physicians, surgeons, or apothecaries, are to be created, if there be no 'physicians,' 'surgeons,' or 'apothecaries,' to manufacture them. An amusing instance of such a man* came to light at the west end of town a short time since. The 'argument' adduced by him may be acceptable in some quarters. Some gentlemen who were electors in the Tower Hamlets waited on one of the members for that district, to request his support of medical reform in the House of Commons, whenever the subject might be brought forward there. The applicants were attentively heard to the end of their case, and considered, from a seeming acquiescence of the honourable member, that they had made good their ground, and gained over at least a voter, if not an advocate, in their cause. The impression, however, was too hastily formed; for when the senator spoke, he com-

* Viz. Dr. Lushington, M.P.

menced with the following suspicious questions:—'Well, gentlemen, after all these explanations, what am I to understand? I have heard a mass of things; in fact, my brain is almost bewildered by your accounts of opposing interests, monopolies, and what not. Now pray what do you want? What is it you want? What law do you require? What are you going to Parliament for? If you can't settle these great differences amongst yourselves, how can Parliament settle them for you?' To these hastily-offered interrogatories it was replied, that they wished *to abolish by law the absurd distinctions which exist in the profession, and to unite all ranks in one Faculty of Physic.* 'Oh, by Jove!' said the astonished senator, 'are you mad? Have you lost your wits? Was there ever before heard such a wild-goose scheme? Why, gentlemen, I put it to you now, I put it to you,—*abolish distinctions?* Good heavens, how is it to be done? Is not the physician the physician, the surgeon the surgeon, and the apothecary the apothecary? Abolish these distinctions? Pooh! Nonsense! How can we do that? I must abolish myself I see. I shall be happy to do any thing *reasonable* for you, gentlemen, but I can't support that. Good morning;' and off he went."

FRENCH MEDICAL REORGANIZATION.

In our last number but one we gave a sketch of the proceedings of the Académie de Médecine in the business of drawing up their project of reorganization at the command of the Minister. Their labours have since been closed, and though there was much desultory discussion on various amendments proposed by MM. Roux, Velpeau, Lisfranc, and others, no material alteration was adopted. M. Double retained his Report, with the exception of some merely verbal corrections and slight changes of form.

We mentioned that the Faculty also were at work on a separate project, by order of the Minister: they too have finished their task; and it has given much satisfaction that the members of this learned body have so cordially concurred in all essentials with their brethren worked at their project with an earnestness and an ability worthy of the of the Academy. They demand the suppression of medical juries and of the *officiers de santé*—the creation of three new faculties, in addition to the three already existing—the establishment of *médecins cantonnaux*, and of the councils of medicine. They go further, and recommend that the professors in the respective faculties be entitled to larger salaries, in order to render them as much as possible independent of private practice, and to excite the emulation of future aspirants to the chairs.

Nor have the members of the Medical Association been idle: these volunteers have appointed a committee of five, namely, MM. Orfila, Husson, Joly, Amussat, and Jules Guerin, to draw up a document for M. Guizot's consideration. The time was short when this resolution was adopted; but it was hoped that the deputies would avail themselves of the discussions in the Academy, and speedily adopt a project acceptable to all. The Minister announced that he should require to have the result of the labours of the Academy and the Faculty by the end of the month (November), for he intended to bring forward his project of law relating to medical reform immediately on the assembling of the Chambers.

Opinions, we understand, are much divided in the French metropolis as to the probable upshot of all this preparation: and it is thought by some of the shrewder calculators that it will end in no such great reform after all. Nothing, it is confidently asserted, will be done in the Chambers in the next session; and when a project shall eventually be adopted, it will go no further than the suppression of medical juries, and the establishment of medical councils: every thing else will remain in *statu quo*. One thing, however, is certain—that, whatever may be the issue of these proceedings among our Parisian brethren,

they, the Academicians and the Faculty, have displayed an earnestness and an ability worthy the reformers of medicine in a great nation; while, by their example, they afford a contrast to the crude and hasty doings of certain *soi-disant* reformers among ourselves, that cannot be contemplated without feelings of much humiliation.

THE MONTHYON PRIZES.

The funds, from the bequest of the late M. Monthyon, at the disposal of the Académie des Sciences this year, have amounted to no less than 100,000 francs (£4000.) Above 40,000 fr. have been disbursed for the late annual distribution of prizes, including 17 gold medals, value 1000 fr. (£40) each. The residue goes to defray the expenses of printing the prize works, and for other charges. But it is understood that the funds are accumulating considerably in the hands of the trustees, and that an extension of the objects of this liberal endowment is in contemplation. The express purpose of the testator was to reward *discoverers;* but it is intended, it seems, to allocate a large portion of the prize money in future to the authors of works of utility, and foreigners are not to be excluded from competition. Indeed, in the last list, we observe the names of two Russian physicians, one Danish, one Polish, and one Englishman.

DEATH OF BARON BOYER.

The venerable Boyer, Professor of Clinique Chirurgicale, and Surgeon-in-chief of La Charité, died on the 24th ult., after three days' illness. He was buried without any pomp, having specially directed in his will that no funeral orations should be pronounced over his remains.

M. DUPUYTREN.

This eminent surgeon left Paris on Sunday se'nnight, for a tour in Italy. He recently experienced some alarming symptoms, particularly a paralytic affection of the face; and he has been induced to try the efficacy of a more southern climate in restoring him to his former vigour. Meantime, the chair at the Hôtel Dieu has been confided to M. Sanson.

CLINICAL LECTURE

ON

DISEASES OF THE TESTICLE,

Delivered at St. George's Hospital.

By B. C. Brodie, Esq. F.R.S.

SCROFULOUS DISEASE OF THE TESTICLE.

The testicle is also liable to scrofulous inflammation, and the disease is well marked.

The patient experiences a slight pain in one part of the testicle, and you feel there a little enlargement, generally at one end of the epididymis. Then he feels a slight pain at another part, and you find there another enlargement, and this is generally also in the epididymis. These little tumors increase in size, becoming gradually more painful. Sometimes as many as three or four of these tumors are found on the surface of the testicle, generally connected with the epididymis. The skin becomes adherent to them, and one of them becomes an abscess, which bursts through the external skin. A similar abscess forms in another, and runs the same course. These abscesses discharge very little matter, and they do not heal like a healthy abscess. When you introduce a probe into one of the sinuses thus formed, you find that it passes down into the centre of the tubercle or tumor, in which the abscess originated.

The disease will go on in some instances until the whole of the testicle becomes disorganized. Sometimes it is confined to one testicle; sometimes both are affected in the same manner. Sometimes it will completely destroy one of the testicles; but more frequently the testicle is only partially injured, and a great deal of the glandular structure remains in a natural state.

In general, you find this disease connected with other scrofulous symptoms: the patient may have enlarged glands in the neck, or perhaps a scrofulous disease of his spine, or hip, or some other of the articulations. In the advanced stage of the disease, I ought to have mentioned that the testicle sometimes becomes uniformly enlarged and hard throughout; but still, on a careful examination, you find at certain parts the remains of the projecting tumors which existed in the beginning.

Treatment.—The scrofulous disease is very tedious in its progress, and the cure is very tedious also. We have no remedy that will act specifically on it. As to mercury, if that be given, it does harm instead of good, as it generally does in scrofulous cases. The

treatment which I have seen productive of the most benefit is the following:—Attend in every way to the patient's general health; see that his diet is upon a regulated system; let him, if possible, spend a good deal of his time at the sea-side; give him tonics where they seem to be required, (and they generally are,) exhibiting steel or sulphate of quinine according to circumstances, and give also the liquor potassæ internally. I have seen more benefit derived from the exhibition of this last medicine than from any thing besides. You may begin with prescribing half a drachm, combined with a small quantity of tincture of gentian, to be taken in a wine-glass of fresh small beer, three times a day, and the dose may be gradually increased to a drachm, which is to be given in a proportionate quantity of beer. When this has been taken for about three months, it may be omitted for a month, and then exhibited again; and you may continue in some instances to give it, with occasional intermissions, for two or three years. You must watch its effect, for every now and then it will not agree with the stomach, in which case you must give it in smaller doses, or suspend it altogether; but in nine cases out of ten, it does not disagree, and the patient may continue it for a great length of time. I advise you to give it in fresh small beer, because it is not so disagreeable to the taste in beer as in any other vehicle, and the patient does not become nauseated with it when taken in this manner. All beer, even the freshest, though it does not taste acid, nevertheless contains in it a certain quantity of vinegar, and no doubt a small quantity of the liquor potassæ must be neutralized by it. I have a notion that the alkali taken in beer does more good than when taken in any other way; and it appears to me not impossible that the acetate of potass, which is formed by the combination of the alkali with the vinegar of the beer, may be serviceable in this and other scrofulous diseases. When I have seen much good arise from *liq. potassæ* it has generally acted as a diuretic, and you know that the acetate of potass has considerable diuretic properties.

There is another remedy which I have used in two or three cases lately with advantage, namely, the tincture of iodine. One of these cases especially deserves to be noticed, as the testicle was not only much diseased, but had been so for a long time. The *liq. potassæ* had been taken with manifest advantage, but the patient was tired of it, and I thought it began to disagree with his stomach. I now gave him the tincture of iodine, in small doses, with a decoction of bark, and the improvement under it was more decided than that which had taken place previously under the alkaline solution. The testicle became very soon reduced to nearly its natural condition. Be it observed, that you are to give the iodine in small doses, and always with the greatest care. I shall not, however, say much upon the use of this remedy at present, because I think that what the subject deserves is not to be comprised in a few words, and I shall have an opportunity of calling your attention to it in one of my clinical lectures hereafter.

VARICOCELE.

The veins of the testicle frequently become varicose, and this occurs especially in costive persons. It is more common in the better classes of society than in the lower.

If you inject the parts and dissect them, you find the veins very much dilated; probably they are also elongated, at least this supposition will best account for their becoming more tortuous than in a natural state. You see in this specimen [presenting it] what a large tumor is formed by the dilated veins. The testicle lies at the bottom of the tumor, the latter being broadest near the testicle, and becoming narrower near the groin. When the patient lies on his back, the tumor altogether disappears, because the weight of the blood then carries it back to the *vena cava*; but when the patient stands up it re-appears, because the same cause now operates in a different direction. You may cause the tumor to disappear by the pressure of the hand, not all at once, but gradually; and when you take away the pressure, it re-appears gradually also.

In the greater number of cases, the disease gives the patient no inconvenience, so that many persons have it without being aware of the circumstance. In some cases, however, it produces a sense of weight, and even pain in the testicle. I had a patient in whom the pain was very severe indeed, in consequence I suppose of the varicose cluster pressing on some nervous filament. When the disease has attained a great height, and been of long continuance, it causes the testicle to become wasted. In fact, varicocele cannot exist to a great extent without occasioning an imperfect circulation of blood in the testicle, and under these circumstances it is not remarkable that the testicle should waste.

Treatment.—For the most part the disease requires no treatment whatever; but if the varicose veins be sufficiently large to give inconvenience, you may advise the patient to wear a suspensory bandage, purge him occasionally, and let him bathe the parts twice daily with cold vinegar and water. In this way considerable relief may frequently be obtained.

It has been proposed by some to cut down upon the varicose veins, and put a ligature upon them. Sir Everard Home performed the operation in one instance in this hospital. In this case, venous inflammation took place, attended with so much constitutional disturbance that the patient nearly died. I would not advise you to resort to such an operation, for no one ought to run the risk of dying on account of a disease which never proves fatal. A man was admitted into this hospital with a varicocele, which was attended with some unusual symptoms. The tumor was small, but the patient suffered such excessive pain, that being a labouring man, it prevented him gaining his bread in the usual way. There was one pretty large varicose cluster, and that was all. Having examined the case very carefully, I thought that the pain was accidental, arising from some nervous filament being in the way, and being pressed upon by the varix. Under this impression, I divided the scrotum with a bistoury; and the varix having protruded through the opening, with a pair of scissors I cut it across. A little bleeding took place, but none of any consequence: pressure for a few minutes stopped it, the wound healed, no inconvenience followed the operation, and the patient was entirely relieved from the pain which he suffered previously. This case occurred many years ago, I believe fifteen or sixteen, and you may suppose that the cases requiring such an operation are rare, as I have never had occasion to perform it since.

I may mention an experiment which I made in one case apparently with some advantage. A boy was admitted with a very bad varicocele, and a wasting of the testicle in consequence. I kept him in bed, and applied a blister over the tumor in the groin, keeping the blister open. It tormented the boy a good deal, but at the end of a month I healed the blister, and he was allowed to go about. The varicocele was much diminished in size, and the pain which it occasioned was much relieved. We kept the patient about the hospital for some time, in order to ascertain whether the symptoms returned or not; and so long as he remained in sight, he continued in a very comfortable state. Whether the relief was permanent I know not. I was led to adopt this method of treatment because I found that a similar plan was useful in some very bad cases of varicose veins of the legs, upon which subject I may have an opportunity of speaking to you on some other occasion.

VENEREAL INFLAMMATION OF THE TESTICLE.

In speaking of chronic inflammation of the testicle, I told you that this disease was sometimes the result of the venereal poison; but it has occurred to me since, that I did not enter sufficiently into this part of the subject. It has been long known that the testicle is affected in certain cases of syphilis, and the patient has then been said to labour under a syphilitic or venereal sarcocèle. Now if you inquire into the history of the venereal sarcocele, you find that it exactly corresponds with that of the common chronic inflammation of the testicle, such as I described it to you at the last lecture. It has the same characters, and it is cured by the same remedy—viz. the administration of mercury. These circumstances are themselves sufficient to justify the opinion that venereal inflammation of the testicle does not differ from common chronic or tubercular inflammation of that organ, arising from other causes; and this opinion is confirmed by one case in which I had the opportunity of examining the morbid appearances after death, and found them to correspond with those which I described in the last lecture.

This affection of the testicle is not one of the most common symptoms of syphilis, yet it is not very rare. It does not occur at an early period of the disease; on the contrary, it is a late symptom, and it is generally accompanied, not by a papular, but by a tubercular eruption; which last indicates either a more advanced stage of the venereal disease, or a greater intensity of the poison, than that which gives rise to an eruption of papulæ.

The venereal inflammation of the testicle requires the same treatment as that which I described at the last lecture, only with this difference—that in these cases it is generally right to continue the mercury for a longer time. There are very few cases of venereal inflammation of the testicle in which mercury ought not to be continued for a couple of months; and in the greater number of cases it ought to be exhibited for a still longer period. You are to be guided, however, as to the length of the mercurial course, by observing, not merely the changes produced on the testicle, but also those which take place in the other symptoms; in short, the condition of the testicle is only one of the circumstances by which your practice is in these cases to be regulated.

HÆMATOCELE.

The next disease to which I shall call your attention is that of hæmatocele. Hydrocele is so named because there is a swelling formed of water—υδωρ, in Greek, being water; and κηλη, a tumor. Hæmatocele is so named because there is a swel-

ling containing blood—from the Greek word αἷμα, blood.

Some writers have distinguished two kinds of hæmatocele—one where it occurs in the cellular membrane of the scrotum only, and the other where it is in the testicle, or the *tunica vaginalis*. The first, however, is simply ecchymosis, and ought not to receive the name of hæmatocele. In true hæmatocele the blood is poured out into the cavity of the tunica vaginalis from a ruptured vessel, either of that membrane or of the testicle itself.

Hæmatocele is, in most instances, independent of hydrocele; but in some it takes place in combination with it. Each of these varieties requires a distinct consideration.

A blood-vessel in the testicle may be ruptured in consequence of a blow. A gentleman, riding on horseback, struck his testicle against the pummel of his saddle, and in the course of a few minutes a large swelling appeared, connected with the injured part. In another case, the same thing occurred in consequence of a violent effort made in lifting a heavy weight. At other times, but more rarely, a hæmatocele occurs without any evident cause. I suppose it is in this case to be attributed to a diseased state of the blood-vessels. Extravasation of blood within the cranium very rarely takes place independently of mechanical injury, except the blood-vessels are diseased; and the same diseased state of the vessels which makes them liable to give way in the brain, makes them liable to give way in other parts of the body. Persons who have diseased vessels, frequently have extravasation of blood into the cellular membrane of the legs or thighs, forming afterwards collections of fluid resembling coffee-grounds; and it is reasonable to suppose that under the same circumstances blood may be effused from the vessels of the testicle.

A tumor forms then, connected with the testicle, in the *tunica vaginalis*. At first the blood is always contained in the *tunica vaginalis* only; and generally speaking, it never passes out of that membrane. The *tunica vaginalis* is distended with blood; and there is a tumor much resembling the tumor of hydrocele in figure, with the testicle at the posterior part; but it is more ponderous than a hydrocele. It is moreover opaque, so that the light of a candle will not shine through it, and it occurs all at once. These circumstances are sufficient to prevent the disease being mistaken for a hydrocele, except by the most careless observer.

Treatment.—If the hæmatocele be small, very little treatment is required. The blood that is extravasated will gradually become absorbed. Absorption, however, does not take place at once. The tumor may remain for several months without being altered, and then begin to diminish. I do not say it will disappear altogether, but it will be so much reduced as to give the patient no inconvenience; for, indeed, I believe that some remains of the extravasated blood, where much has been effused, will continue ever afterwards. Here [exhibiting it] is a specimen of hæmatocele, in which these layers of coagulum are seen adhering to the inner surface of the tunica vaginalis. There is one portion, of the size of a horse-bean, which has become attached to it by a narrow neck, so as to assume the form of a pendulous tumor covered by a smooth membrane, and which, I suppose, never would have disappeared. But I would not recommend this negative treatment when the hæmatocele is of a large size. Here you should resort to some artificial means for getting rid of it: first, because the patient will suffer inconvenience from the bulk of the tumor; secondly, because I have great reason to believe, that where there is a large extravasation of blood into the cavity of the tunica vaginalis, the pressure of it upon the testicle will disorganize, and in fact destroy, that organ. I will give you my reasons for holding this last opinion. When I was house-surgeon at this hospital, I found, in examining the body of an old negro who died of some other disease, a large tumor resembling a hydrocele in appearance. However, on cutting into the *tunica vaginalis*, it appeared that there was no hydrocele, but a large quantity of coffee-ground fluid, with some portion of coagulum, evidently the remains of an old hæmatocele. There were, perhaps, eight or ten ounces of this fluid, and some layers of the coagulum adhered to the inner surface of the tunica vaginalis. I looked for the testicle, but it had almost entirely disappeared. You could trace the spermatic cord into some small remains of it which were just perceptible, at the posterior part of the hæmatocele. A gentleman, attending my lecture, four or five years ago, gave me this preparation [presenting it]. It was taken from an exhumed subject, and he did not know the history of the case. The appearances were exactly the same as in the patient whose case I have just mentioned.

The operation for the relief of a hæmatocele is very simple. You must cut into the tumor; and when you have done so, of course you may at once, if you please, turn out the coagulum, but I advise you not to do so, as such a sudden exposure of the cavity of the tunica vaginalis is likely to induce severe inflammation, attended often with very urgent symptoms. Your better way is to make an opening into the *tunica*

vaginalis, and take no pains whatever to squeeze out the coagulum; put on a bread and water poultice, and allow it to escape spontaneously and gradually. Every time the poultice is changed, you will find some of the contents of the tumor lying on the surface of the poultice. At last the *tunica vaginalis* will be emptied, and it will have become contracted at the same time to the natural size; the inner surface of it being in a state of suppuration. I suppose that it granulates, and that the cavity becomes obliterated, just in the same manner as after the operation for hydrocele by incision.

In general, I should have mentioned, when hæmorrhage takes place, the swelling is the only inconvenience that the patient suffers; there being but little pain, and no constitutional disturbance. But there are exceptions to this rule. A man who had been a hard drinker, between 50 and 60 years of age, was stooping down to tie his shoe, making no more effort than that, when suddenly the testicle began to swell, and a large hæmatocele took place; so large that the tunica vaginalis itself gave way, and the blood was poured forth into the cellular membrane of the scrotum. The man was admitted into the hospital under these circumstances. His pulse soon got up to 130 or 140 in a minute; his tongue became furred; he had a hot skin, and a great deal of nervous irritation; in short, a very severe irritative fever; and he very nearly died. However, after a time he began to mend; and when the constitutional symptoms had subsided, Mr. Keate, senior, who was at that time surgeon to the hospital, cut down upon the tumor and let out a mass of extravasated blood, which seemed to have been imbedded in the scrotum. Another tumor remained, resembling a common hydrocele in shape, and which seemed to be a collection of blood in the *tunica vaginalis*. This was not opened. The wound in the scrotum healed, and the patient left the hospital.

HÆMATOCELE COMBINED WITH HYDROCELE.

Hæmatocele, I said, occurs in combination with hydrocele. A patient, for instance, has a hydrocele, which having attained a large size, is much in his way, and very liable to be squeezed, or to be accidentally struck. Every now and then a hydrocele being thus injured, a blood-vessel is ruptured; blood is poured out into the cavity of the tunica vaginalis, and there mixed with the fluid of the hydrocele. The hydrocele then becomes immediately swollen to a larger size than it was before; at the same time, though it is in the cavity of the tunica vaginalis, you can generally see the dark colour of the blood through the distended skin; and when you hold a candle on the other side of the hydrocele, you find that it has lost its transparency.

This is one way in which a hæmatocele takes place in combination with a hydrocele; but it also occurs in another. Sometimes in introducing a trochar to draw off the fluid of a hydrocele, a small artery lies in the way of the instrument, and is accidentally wounded; and the blood from this little wounded vessel flowing into the cavity of the tunica vaginalis, becomes mixed with the fluid of the hydrocele.

The quantity of blood extravasated of course varies in different cases, according to the size or number of ruptured vessels. Sometimes it is so little as to be barely sufficient to tinge the fluid of the hydrocele red, and making no perceptible difference in the size of the tumor; but at other times the quantity is large, so that there is more blood than serum, and the hydrocele may become increased all at once to more than double its original size.

Treatment.—If you meet with a case of hæmatocele combined with hydrocele, I advise you to proceed thus:—In the first place puncture the tumor with a trochar, and draw off as much of the fluid as will come away. If you find the fluid only a little tinged with blood, and, after it is drawn off, that little coagulum remains, put a piece of sticking plaister on the wound of the scrotum, and let it heal. Then when the fluid is again collected, draw it off a second time. Probably you find it a little less tinged with blood; and some of the coagulum having become dissolved, the quantity that remains after the abstraction of the fluid is diminished. Thus after three or four times drawing off the fluid, you will find at last that the whole of the coagulum is dissolved in the fluid, so that the latter comes away clear. The case is now what it was originally, one of simple hydrocele, and you may inject it in the usual manner. I do not suppose it would be safe to have recourse to this last operation, while there are any remains of the coagulum in the cavity of the tunica vaginalis.

This plan will answer in many cases, but it would be very tedious work indeed to cure the patient by this means, when the quantity of extravasated blood was very large. In this case you must perform the operation that I described just now: lay the patient on his back, make a free incision into the tunica vaginalis, let the water run out, let as much blood run out as will flow of itself; but do not sponge out the blood, or squeeze the parts to get rid of the whole coagulum at once, for all rough treatment will tend to increase the inflam-

mation of the tunica vaginalis, which in a greater or less degree must follow the operation. Apply a large poultice to the part, and in the course of time you will find that all the blood has come away; the inner surface of the *tunica vaginalis* suppurates; at last the cavity of it becomes obliterated, and the patient is cured at once of the original disease, the hydrocele, and of the secondary disease, the hæmatocele.

LIVERPOOL HOSPITAL.

Aneurism of the Femoral Artery—Ligature of the External Iliac.

James Leighton became a patient of Mr. Banner's, surgeon to the Liverpool Hospital, on the 2d of October, 1833, with aneurism of the femoral artery.

History.—At the latter end of June last, whilst striking with a 30 lb. hammer, (his employment being that of striker in an iron foundry,) he felt a sudden pain in the upper part of the thigh, near the groins, of the left side. It did not prevent him continning his work. At night, on going to bed (the pain remaining), he discovered a slight swelling in the situation of the pain. He did not pay much attention to it, but continued his daily avocation. The tumor gradually increased in size, and the leg and thigh began gradually to swell. It was not until the middle of September that the pain became so great, and the swelling increased so much, as to prevent him from walking without difficulty. His health has generally been good. Early in 1831 he was severely salivated for syphilis. He does not remember having had any affection of the heart.

Appearances.—He appears about thirty years of age; of spare habit of body, though muscular; his countenance sallow. There is very considerable swelling of the whole limb, and distention of the superficial veins, which has given a blue appearance to the limb. There is a pulsating tumor situated about an inch below Poupart's ligament, of the size of a hen's egg, though not much elevated; it can be considerably lessened by pressure, which being removed, it resumes its original bulk. There is an enlarged gland between the tumor and Poupart's ligament, which gives it an uneven feel. The bellows-sound is very distinct; the action of the heart is regular; the pulse at the wrist is at 76, and easily compressed; the tongue clean.

Treatment.—A tea-spoonful of Epsom salts was ordered to be taken every morning. Spirit-lotion to be applied constantly to the tumor and upper part of the thigh. The patient to remain in the recumbent position, with the leg slightly bent. Low diet.

A consultation was held, and by the advice of his colleagues, Mr. Gill and Mr. Wainwright, Mr. Banner decided upon performing the operation.

Operation.—On the 14th of October the external iliac was tied. An incision was made, commencing about half an inch on the outside and a little above the abdominal ring, which was carried down to the edge of Poupart's ligament, and continued on in the direction of the anterior superior spinous process of the ilium, for about two and a half inches. The tendon of the external oblique was divided the whole length of the incision; the spermatic cord was seen near the edge of the cremaster muscle, and traced to the transverse fascia; the finger was introduced into the opening through which it passes, and with slight difficulty enlarged sufficiently to expose the artery. The sheath was torn with the assistance of a sharp-pointed probe. The leg was now bent towards the body; the finger was placed between the two vessels from within, the artery resting on the point; the common aneurism needle was easily introduced from the opposite side, and the artery tied with a ligature composed of three threads. The pulsation in the tumor immediately ceased; the wound was lightly dressed, and the patient removed to bed.

After treatment.—The limb was encircled in a warm blanket, and placed in a bent position on a pillow. Six hours after the operation he complained of restlessness and soreness in the wound; the pulse was at 90, and full; the tongue was slightly furred, and dry; complained of thirst. The limb was of a higher degree of heat than its fellow. Eight ounces of blood were taken from the arm.

15th.—He passed a sleepless night; complains of an aching pain in the knee, extending to the foot; great soreness of the wound, and tension of the abdomen, which was increased by the pressure of the bandage. The leg is of a comfortable heat; the pulse full, at 90; bowels have not been acted on.

V. S. ad ℥viij.—℞ Mag. Sulph. ℥ij.; Inf. Rosæ, ℥iss. ft. haust. ter die sumendus. The dressings were removed, and the wound poulticed with linseed-meal. Low diet.

16th.—He has passed a good night; the leg free from pain, and very much reduced in size. The tumor is much reduced; the wound has discharged a little bloody serum; the edges look puffy; the

pulse is below 80, and good; the tongue is still slightly furred, though moist; the bowels have been acted on once. He complains of slight numbness about the knee, accompanied with a feeling of coldness; yet the leg remains of the same heat as the opposite one.

℞ Ol. Ricini, ʒj. statim.

From this time up to the 30th—viz. the sixteenth day after the operation—he has not had one bad symptom: the swelling of the leg has quite subsided, and that of the tumor nearly so; the limb has continued of a natural heat; the bowels have been regular; and the wound is nearly cicatrized. On this day the ligature came away.

Nov. 3d.—He was so well as to be able to be removed to his own home.

ST. BARTHOLOMEW'S HOSPITAL.

To the Editor of the Medical Gazette.

Sir,

In looking over my notes of cases, I find the following, which is an exception to the general rule laid down by Mr. Brodie in his clinical lectures, reported in your Gazette for October 14th of this year, with regard to the union of fractures occurring in persons afflicted with carcinoma. If you should think the case interesting, you will oblige me by its early insertion.—I am, sir,

Your obedient servant,

W. Martin Coates.

Scirrhus—Ununited Fracture of the Humerus.

Martha Osborne, admitted into President Ward, May 12, 1833.

History.—She has had scirrhus of the right breast twelve years, which has been in an ulcerated state twelve months; her general health having been always pretty good. Four days ago, in coming down stairs, she tripped, and in catching at the wall to save herself she felt her arm give way.

Present Symptoms.—A knotty, malignant, ulcerated tumor occupies the situation of the right mamma. A thin, dark, fœtid ichor exudes from the ulcerated surface, and the glands in the axilla and in the neck, just above the clavicle, are of a scirrhous hardness. She complains of no pain. The humerus is broken at about its middle, on the right side, but no crepitus is to be felt, although the ends of the bones move freely upon each other.

The fracture to be put in splints.

June 20th.—She has gradually sunk since her admission, in spite of most generous diet; having had throughout no other symptoms than those of general debility; and this day she died. The fracture has not united.

Postmortem examination.—A genuine carcinomatous tumor occupied the situation of the right mamma; a small portion of this structure having caused absorption of the cartilage of one rib and a portion of the sternum, thus penetrating the anterior wall of the thorax. There was a substance resembling exactly the medullary matter of the brain in texture, but having more of the carmine tint; covered externally by a membrane very like the periosteum, interposed between the fractured ends of the bone, which touched but at one point, where there was an attempt at ligamentous union. Except at this point, the shaft of the humerus, to the extent of three inches, had been absorbed, and the medullary structure before described accurately filled the space thus left.

There was a very hard osseous matter, half an inch in thickness, extending through the whole diameter of the upper fractured end of the bone, and nearly through that of the lower; thrown up, as it were, to resist the encroachments of the diseased growth. This question appears to me interesting: whether did the diseased structure, between the fractured ends of the bone, arise in a predisposed constitution from the inflammation caused by the injury; or did this structure, previously formed, produce by pressure such absorption of the bone as to render it liable to give way on a slight force being applied?

The latter, for the following reasons, seems to be most probable:—

1st. That the fracture was caused by a slight accident.

2dly. That there was no crepitus to be felt on her admission—only four days after the accident.

3dly. and lastly. That the bone was not diseased, but appeared to be undergoing the simple process of absorption from pressure, at the same time that nature was throwing up a bony wall for the purpose of resisting the progress of the disease.

THE LATE MR. SHARPE,

OF BRADFORD.

(From a Correspondent.)

On Thursday morning, November 28th, died, at his residence, Manor-place, Bradford, Yorkshire, William Sharpe, Esq.,

Consulting Surgeon of the Dispensary, to which institution he had been attached from its foundation in 1824. On his resignation of the office of Senior Surgeon, he was unanimously elected to the above situation, which he continued to hold till his death, equally to the satisfaction of his medical brethren, the comfort of the patients, and his own honour. Brought up under the late Mr. Hey, of Leeds, he was early and thoroughly versed in every accomplishment which could form a sound and skilful surgeon; and through life he maintained the high reputation which such an education promised. Engaged for nearly half a century in a laborious and anxious profession, he was not only admired for a faithful, punctual, and successful discharge of its arduous duties, but his patients sought his advice as their friend and counsellor, knowing that they might rely on an honest opinion. His great characteristics were strong sense and soundness of judgment—a fine perception of honour — integrity unsullied — a reservedness of manner, yet a warmth of heart and benevolence of purpose, known only to those who had the happiness of enjoying his friendship—and without any pretensions to superior sanctity, a firm reliance on the mercy of his God through the merits of his Saviour, which should ever characterize a genuine Christian. He never came before the public but when duty called; but when he did so, induced by affairs either of an important general or local nature, he spoke sparingly, and with becoming modesty, yet seldom failed to throw light on the subject under discussion, and carry conviction to the minds of his hearers by the straightforwardness of his reasoning and earnestness of manner.

On Wednesday (the day preceding his death) he was engaged in his usual professional avocations, and apparently in his wonted health and spirits; nor did he complain of any ailment, except a slight lumbago, till the evening. On retiring to bed, about ten o'clock, he felt a little uneasiness in his stomach, but nothing of any very alarming nature. About one A.M. he called up his servants and apprentice, having been seized with most violent pains and spasms in the epigastric region; but by warm applications to this part, and an antispasmodic draught, which he himself prescribed, he received great relief, and ordered his apprentice to bed. About two o'clock these symptoms returned, and in a few moments, with his head on his pillow, he closed his mortal career. So truly may it be said, "that in the midst of life we are in death."

LIST OF NEW MEDICAL WORKS.

An Introduction to the Study and Practice of Midwifery, and the Diseases of Women and Children. By W. Campbell, M.D. 8vo. 15s. bds.

The History of a Case in which Animals were found in Blood drawn from the Veins of a Boy. By J. S. Bushnan. 8vo. 3s. 6d. bds.

Hunterian Reminiscences; being the Substance of a Course of Lectures by the late John Hunter in 1785. Edited by J. W. Parkinson. 4to. 16s. cl.

Bisset Hawkins, M.D. Professor of Materia Medica and Therapeutics in King's College, is preparing a work on the "Elements of Medical Police, or the Principles and Practice of Legislating for the Public Health," 1 vol. 8vo.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *Dec.* 3, 1833.

Abscess	1	Heart, diseased	8
Age and Debility	89	Hooping-Cough	21
Apoplexy	9	Inflammation	37
Asthma	42	Bowels & Stomach	4
Cancer	1	Brain	8
Childbirth	4	Lungs and Pleura	12
Cholera	2	Insanity	17
Consumption	106	Jaundice	1
Convulsions	52	Measles	16
Croup	1	Mortification	12
Dentition or Teething	18	Paralysis	5
Dropsy	28	Rheumatism	6
Dropsy on the Brain	15	Scrofula	1
Dropsy on the Chest	3	Small-Pox	13
Epilepsy	1	Spasms	2
Fever	17	Stone and Gravel	1
Fever, Scarlet	18	Thrush	2
Fever, Typhus	1		
Gout	1	Stillborn	12

Increase of Burials, as compared with the preceding week . . . 81

METEOROLOGICAL JOURNAL.

Nov. 1833.	Thermometer.	Barometer.
Thursday . 28	from 33 to 43	29·41 to 29·20
Friday . . 29	39 45	28·94 29·14
Saturday . 30	33 44	29·28 29·46
December.		
Sunday . . 1	37 51	29·60 29·80
Monday . . 2	39 47	30·04 Stat.
Tuesday . . 3	41 49	29·97 29·85
Wednesday 4	45 55	29·64 29·59

Prevailing wind, S.W.
Except the 30th, cloudy, with frequent rain.
Rain fallen, ·75 of an inch.

NOTICES.

Mr. Bransby Cooper's communication reached us too late for the present No.

Will a General Practitioner give his name? Statements of facts ought to be authenticated, although our correspondent appears to be of a different opinion.

We cannot publish Milo's letter without a real signature, nor even then without considerable modification.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 14, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture X.

PATHOLOGY of MENSTRUATION.

MENORRHAGIA.

Definition. — Menorrhagia consists in a more copious secretion of the menstruous fluid than is usual. We are not, however, to consider every case in which there is a profuse red discharge from the vagina,—even although it may recur at intervals,—one of menorrhagia; because bleeding from the uterine vessels is of frequent occurrence; and this state differs most materially from excessive menstruation.

Cullen has placed this disease in the class *pyrexia*—order *hæmorrhagiæ*. This appears to be an erroneous arrangement; for it is not a hæmorrhage, but an increased secretion;—besides, it is not always attended by pyrexia, nor indeed generally. It would more properly be comprehended under the order *apocenoses*, or increased discharges—of the class *locales*. This great physician seems to have taken up a wrong idea regarding menorrhagia, since he even makes the flooding under abortion a species of it, as well as the lochial discharge after labour; in which two states, however, the fluid is nothing more than blood poured out from open vessels, and cannot be identified in any way with the menstruous secretion.

Two varieties.—I shall consequently not follow Cullen's division, but make an arrangement of my own. We may consider menorrhagia, then, under two varieties.—The first includes those cases in which the discharge appears only at the proper periods; namely, once a month, but in which the quantity secreted is more than naturally ought to flow; and in which the patient remains under the discharge for a longer time than is usual; perhaps 7, 8, or 10 days.—In the second variety are comprehended those cases where the discharge happens more frequently than is natural—probably once in a fortnight, continues flowing the usual period, and then ceases; so that menstruation takes place 25 or 26 times a year, instead of 13.

First variety.—The first variety of *true* menorrhagia is by far the most common; because when a red discharge appears more frequently from the vagina than once a month, it is almost always found to be blood induced by some organic lesion of the womb, and not a secretion. It is oftener observed among women of the higher class, who live luxuriously, and use little active exercise, especially such as take wine freely,—though, perhaps, not to excess,—than in a humbler sphere, among the hard-working population, particularly the inhabitants of the country. It is rare in virgins, and most frequent in women who have had a family, and those employed in heated rooms. It must only be considered as a diseased state, however, when it produces weakness, and is accompanied by derangements in the functions of organs essential to life or comfort. If a copious monthly discharge be natural to the individual, or have been habitual with her from the commencement of her menstruating life, however great the quantity lost may be, we must not look upon the case as the result of diseased action, nor endeavour to restrain the flow. I have already mentioned that scarcely any two women lose the same proportion of fluid at their periodical returns; and some constitutions may require a very profuse discharge, while others may, perhaps,

only be able to afford a very sparing quantity.

It is remarked, also, that menorrhagia may occur under two very different conditions of the system—the robust and plethoric habit, and the relaxed and debilitated frame. It is by far most usually met with accompanying a weakened state of constitution; and symptoms of debility manifest themselves in the same proportion as the discharge increases in quantity.

Symptoms.—Such are, pallid and exsanguined countenance; weak, small, excitable, and frequent pulse; hurried and laboured breathing, much distressed by any unusual exertion; great lassitude, and disinclination or inability to use even moderate exercise; a painful sensation in the loins, aggravated by walking or standing; œdematous swellings of the feet on the approach of night; and indications of deranged digestion. The most prominent of this latter affection are, loss of appetite, with a gnawing pain at the pit of the stomach; flatulence; frequent tendency to syncope; palpitations; and a weakened state of mind, which becomes liable to be strongly moved by slight causes, especially when suddenly applied. Upon such symptoms there is usually attendant *leucorrhœa*—an additional source of debility and distress.

Treatment.—It is seldom, indeed, that this species of pure menorrhagia induces symptoms of such serious description, and not often, perhaps, is it necessary to interfere medicinally; if it should appear, however, that the unusual loss is evidently undermining the health, that plan must be adopted which lessens the determination of blood to the uterus, prevents its vessels becoming too full, and rectifies that condition of system which predisposes to this excessive secretion. This may be done as well by general as by local means. Our local remedies are, cold, applied topically, and astringent injections; such as decoction of oak bark, infusion of green tea, alum in solution, and sulphate of zinc, or copper in solution. My friend Dr. Blundell recommends, in these cases of pure menorrhagia where the discharge has continued for a length of time, and has produced great debility, that an injection should be thrown into the cavity of the uterus itself: one of a very mild kind should be first used, beginning with cold water, and then very cautiously increasing its power, by adding astringent substances; for, as the membrane of the uterus is more irritable than that of the vagina, we must not venture to throw into its cavity so strong an injection as we are accustomed to apply to the vaginal coat. There has long existed a prejudice, in my opinion not sufficiently well founded, against injecting the uterine cavity, and in this country it is rarely had recourse to; on the continent, however, particularly in France, it is a common practice. The suggestion is by no means of modern growth, since it was recommended by Hippocrates in some states of leucorrhœa. If this recommendation be followed, it is quite necessary that the operation should be performed by a medical practitioner, and not left to the superintendence or management of a nurse. A syringe of a peculiar form must be used. A caoutchouc bottle is the best, having a long slender pipe adapted to it, the extremity of which is to be inserted by the guidance of the finger just within the os uteri. An ounce of fluid may be used three or four times a day; a drachm or two only being injected at each jerk, for in the unimpregnated state the uterine cavity is too small to admit more than a drachm of fluid. A tonic plan is highly advisable, with cold bathing, if it can be borne; gentle exercise in the open air, and a nourishing but not stimulating diet.

A case which occurred under my own care about a year ago, forcibly proves the necessity of caution whenever the uterus is attempted to be injected. I removed, with the assistance of my friend, Mr. Pater, an uterine polypus for an unmarried lady, who was reduced to the lowest ebb of life by repeated violent hæmorrhages, and a constant leucorrhœal draining,—the womb being in other respects healthy. The tumor was tied within the os uteri; no pain attended the operation; the sanguineous discharge, which had been profuse just before, ceased immediately the ligature was tightened, and never recurred; but the leucorrhœa continued to a great degree. The polypus separated on the fifth day, when our patient felt better than she had done for many months, and was consequently in excellent spirits. On making an examination, I found the mouth of the womb sufficiently open to admit the whole of the first phalanx of the finger, and I could not detect the least vestige of the tumor. I requested her to leave her bed; ordered a gentle aperient medicine, as the bowels had not been moved since the ligature was applied; and, as the white discharge was still flowing profusely, advised a weak solution of alum to be thrown into the vagina. She remained out of bed seven hours, during which time she used three small syringes-full of the fluid twice; and, soon after the last injection, was attacked with shivering, followed by uterine inflammation, which spread rapidly to the peritoneum, baffled all the means adopted to check it, and terminated fatally on the eighth day after the polypus came away. Reflecting on

this case, I have little doubt that the dilated os uteri admitted within its cavity a portion of the fluid intended to be injected into the vagina only; and that thus inflammation was excited in the organ previously disposed to it by the enlarged size of its vessels—the diseased growth to which it had given origin—the operation, although in itself simple, and not attended with danger—and, perhaps, the sudden checking of a customary discharge. As this is the only instance, however, in which acute inflammation of the uterus has supervened on the operation for removing a polypus in my practice—as it is the only instance in which I have used an astringent injection soon after the tumor has come away—as there was no injury done by the instrument—and as there were no signs of inflammatory action previously to the application of the syringe, I think it is fair to infer that the dangerous symptoms would not have appeared unless an attempt had been made to suppress the leucorrhœal discharge, which it was supposed would retard the convalescence. A valuable warning may be deduced from this unhappy termination.

If the patient be too plethoric, or if the arterial action be unduly excited, an opposite mode of treatment to that recommended where debility prevails, will serve in reducing the discharge. We then should adopt moderate depletion; we may draw blood either by the lancet, leeches, or cupping; purge the patient with freedom; give her saline and refrigerant medicines; use spare diet and a cool regimen. Digitalis will also sometimes be found a very useful medicine: it is, to a certain extent, however, a dangerous remedy, and we must watch its action on the system very carefully. There are three indications by which we may know that digatalis is in operation—nausea and sickness of the stomach, perhaps also a slight degree of purging; an alteration in the character of the pulse, which from being hard, quick, and jerking, becomes weak, slow, and irregular, or intermittent; and an increased secretion of urine. When any of these circumstances occur, the medicine has produced an effect, and we must discontinue its exhibition; for it is observed that this drug will sometimes not manifest any indications of its medicinal properties until it has accumulated, as it were, in considerable quantities in the system, and then suddenly act with proportionate power.

Second variety.—In the second variety of menorrhagia, or in any case where blood is poured out of the vagina, together with the menstrual secretion, it is first our duty to learn if any organic disease exists in the womb. Now you might think it a difficult thing to detect whether blood passes with the menstrual secretion, which so much resembles venous blood in colour; but in truth, the diagnosis is perfectly easy. We can usually ascertain whether blood passes, if we have an opportunity of inspecting the napkins—a thing we always require to do. Should we observe any streaks of coagula, even not larger than a pin or a hair, or if we find small points which are not of greater magnitude than the least shot, we may be quite sure that the case is not one of pure menorrhagia: if, on the contrary, there is no appearance of any coagulated matter whatever, we may then suppose that it is entirely and purely the menstrual secretion which is flowing inordinately.

We can only detect organic disease of the uterus satisfactorily by an accurate examination per vaginam; and this kind of examination, however much the patient may be averse from it, we must insist on; provided she be losing blood from the uterus, and especially if the discharge be attended with pain. I never would consent to continue in the conduct of a case where blood was flowing from the uterus in any quantity, if I were not allowed to make an examination per vaginam. It is necessary to obtain a correct knowledge by this means, for many reasons—partly to form our plan of treatment, and partly that we may give an opinion respecting the ultimate termination of the case; which we cannot pretend to do unless we know what the disease is under which the woman labours. But it is particularly requisite to attend to this point, that we may regulate our practice in respect to astringent injections; for we shall hereafter learn that these applications under malignant diseases of the womb are generally inadmissible;—but if the bleeding be occasioned only by a slight erosion of the membrane, or superficial ulcer of the os uteri, such as is scarcely to be detected by the touch; or be merely the consequence of a flabby state of the coats of the uterine vessels, we shall then find injections of the greatest possible service.

UTERINE HÆMORRHAGE ACCOMPANYING THE MENSTRUAL SECRETION.

We shall speak of the organic diseases of the uterus, giving rise to hæmorrhage more fully in the latter part of the course, and now confine our observations to a flow of blood either accompanying the menstrual secretion or not, but being perfectly independent of any change of structure in the womb.

The uterus more subject to hæmorrhage than any other organ.—The uterus is perhaps more subject to a discharge of blood than any other organ of the female body. This hæmorrhage may be either active or pas-

sive—that is, it may occur in consequence of the inordinate force of the heart's action rupturing the vessels; or from the blood being allowed to escape through the patulous extremities of the arteries, by reason of their weakness, and the flabbiness of the surrounding structure. The first case we should expect to find accompanying a full and sanguine system — the latter, one debilitated and worn out. But by a continuance of the bleeding, although it might have been of an active kind originally, the constitution of even the strongest subject will gradually be broken, and we may have the features of the disease totally changed, and the active converted into the passive hæmorrhage. The blood lost may escape in sudden gushes at uncertain intervals and then cease, leaving the patient for a time entirely free from the discharge; or she may be constantly suffering under a daily draining, not less dangerous in its consequences than the more violent and alarming eruptions.

ACTIVE HÆMORRHAGE.

Symptoms.—The symptoms which are attendant on active uterine hæmorrhage, independently of organic disease or pregnancy, are both general and local. The *general* symptoms are fever, headache, flushed face, heat and dryness of skin, restlessness, white tongue, and a full hard pulse. The *local* symptoms are those of uterine irritation in general: we have pain, therefore, or a sense of fulness and weight in the uterine region, with pain in the back, loins, thighs, and the lower part of the abdomen.

Proximate cause.—The immediate cause of active uterine hæmorrhage, is either a general plethora of the body or a local fulness of the vessels of the uterus themselves.

Remote cause.—Among the remote causes may be classed any thing which has a tendency to induce this state of fulness, by increasing the quantity of circulating blood: such as rich diet, indolence, and a general luxurious mode of life, with a want of exercise.

Treatment.—With regard to the treatment, we shall most likely be compelled to bleed, in some instances sparingly, in others more freely. We must, at any rate, purge the patient pretty smartly; we must enjoin strict abstemiousness—put her on a general antiphlogistic regimen—desire her to remain perfectly quiet—keep in the horizontal posture as much as possible—apply cold to the uterine region, to the loins and pubes—oblige her to breathe a cold atmosphere—give her cold and acid drinks — use astringent injections — and sometimes it will be found necessary to plug the vagina. Cold has a most beneficial effect in restraining hæmorrhage of all kinds: it constringes the vessels, and diverts the blood into other channels; it is found most useful when combined with astringents, as with vinegar, which is our common application. The sulphuric acid, in a diluted form, is given almost empirically in all cases of uterine hæmorrhage, whether dependent on pregnancy or organic disease, or not. Although this medicine possesses tonic powers, that need not deter us from exhibiting it even in the active state of uterine hæmorrhage. It may be combined with sulphate of magnesia, or soda. A very common as well as pleasant form, in which either of these salts may be exhibited, is by dissolving them in the acidulated infusion of roses. Emetics have been recommended, under the idea that the depression consequent on the nausea induced would be beneficial, and for a time restrain the active hæmorrhage. I am not fond of the exhibition of emetics in these cases, because I think it is desirable to preserve the tone of the stomach; and emetics might perhaps materially derange it. However, I do not see that there is any great objection to their use. Nauseating doses of antimony and digitalis have been held in high esteem. Lead, also, has been strongly recommended, with the same intention that we would give digitalis, antimony, or emetics—viz. to keep down arterial action. The acetate is the preparation most usually had recourse to; and the best form in which it can be exhibited, is in a pill containing a grain, or three quarters of a grain, which may be repeated every four or six hours. I have sometimes advised it with decided advantage. It must be watched, however, not less carefully than digitalis, on account of its tendency to produce colic. It is less liable to affect the bowels if combined with a small dose (such as a quarter of a grain) of opium. Generally speaking, we should put the patient on a dry diet, and should most certainly interdict wine, and every other stimulating drink.

PASSIVE HÆMORRHAGE.

Symptoms.—The symptoms which are attendant on passive uterine hæmorrhage, unconnected with any change of structure in the organ, are of a very different character from those I have just enumerated. As this variety arises from debility, so the most prominent symptoms are those of weakness. We have generally languor and inability to use exertion; a pale pasty face; lips almost exsanguined; shining, harsh, and dry skin; the tongue not much altered in appearance, but most likely pale, smooth, shining, and lobulated;

the urine and other secretions scanty and defective; the pulse weak, quick, tremulous — frequently irregular, and easily excited by exertion, surprise, or agitation. As the complaint gains ground, these symptoms become more inveterate; the stomach loses its tone; dyspepsia consequently supervenes, often accompanied by hysteria. After a time, organic visceral disease may manifest itself; generally we have œdema of the legs; occasionally dropsy of the chest, sometimes of the abdomen. In the intervals of the hæmorrhagic discharge, there is almost always more or less of leucorrhœa, especially if the constitution be much affected. There are modified symptoms also of local irritation, particularly pain, or a sense of weakness, referred to the loins or the upper part of the sacrum. This is almost always met with in women who are much debilitated, from whatever cause their debility may arise—whether it depends on continued ill health, profuse discharges, frequent abortions, or mere over fatigue or mental anxiety.

Proximate cause.—The immediate cause is a flabbiness in the coats of the uterine vessels, and a want of tone and firmness in structure of the womb itself. That such a condition of the uterine organ may give rise even to fatal hæmorrhage, without the presence of any organic disease or ulcerated surface, a dissection conducted by Blundell fully proves. He had an opportunity of inspecting the body of a woman who died from uterine bleedings, in which case he found the whole viscus somewhat larger, and its cavity rather more capacious, than ordinary; its lining membrane was more vascular than usual, and somewhat pulpy, but clearly unaffected with any marked organic disease, excepting the dilatation of its capillaries.

Remote causes.—Every thing which tends to weaken the system generally, may be looked upon as a remote cause of passive hæmorrhage; such are abstinence, fatigue, cold, and moisture; profuse discharges; a residence in a low marshy country; frequent or hard labours, and abortions. Rising too soon after labour or an abortion, and violent active exercise continued for a length of time, as dancing, have been accounted predisposing or remote causes. There are also other causes which may excite an eruption under such a predisposition; these particularly affect the uterus, and may be considered to be over-indulgence in venery; irritation of the neighbouring organs, such as worms in the rectum, piles, cancer, or other structural diseases of that gut; or affections of the bladder.

Treatment.—The treatment, as you may suppose, differs considerably from that employed in active hæmorrhage; in some respects, however, the indications are the same. Thus we would enjoin perfect rest in the horizontal posture; we would oblige the patient to lie upon a hard bed — to breathe a cold air; we should give cold and acid drinks, and apply cold vinegar and water to the pubes, loins, and lower part of the belly, unless indeed there be present great depression of the system; for I shall hereafter tell you, that there is a point below which the vital powers cannot bear up against a continued application of cold; then, indeed, warmth and stimulants become necessary, to prevent the patient actually sinking under the loss. Injections must also be employed, or the plug may be used. When the discharge is flowing, it is generally necessary to support the strength by a generous diet; and if there be dangerous depression, we are compelled to have recourse to stimuli, not from choice, but from necessity. I should prefer those of a medicated kind, such as ammonia, ether, camphor; but sometimes wine is necessary, or even undiluted spirit. Opium is strongly recommended by Professor Burns, in doses of two grains, or an adequate quantity of the tincture; such remedies, however, are only to be given as restoratives, and to be avoided unless immediate danger appear. This will be indicated by a quick, small, feeble, irregular pulse; by the breathing being hurried and laboured, drawn with sobs and sighs; by jactitation; pain and tightness at the præcordia; paleness of the face, and exsanguined lips; cold extremities, and the surface of the neck and limbs bedewed with a cold sweat; frequent attacks of actual syncope, or continued faintness; glassy eye, indistinctness of vision, blindness, and convulsions. These are, in fact, the symptoms of hæmorrhage in general, which it will be our duty hereafter, in the progress of the course, more particularly to dwell upon.

If the case be not so inveterate, and there is no need of the exhibition of stimuli to keep the patient from sinking, the following plan persevered in for some time may be found useful: enjoining rest and the cool regimen; the use of cold and astringent injections; sponging the loins daily with cold vinegar and water; requesting the patient to avoid all exciting causes; to sleep but little, and that on a hard bed; to use the plunge, shower, or cold hip bath, combined with friction on the surface of the body; we may give freely of sulphuric acid; or tincture of kino, in drachm doses, or the powder of the uva ursi in the same quantity. Both of these have been highly recommended by Burns It will be proper also to give a small qua-

tity of wine; and those of the astringent kind, containing the least proportion of alcohol, will be preferable; light port, therefore, or generous claret, should be selected. Sometimes I have thought that good has arisen from the exhibition of alum in these cases; about five grains may be given for a dose; and it may be combined with sulphuric acid; for the alum, being itself a sulphate, will not be decomposed by the addition of the acid. In other cases I have found the sulphate of zinc, in doses of a grain, particularly beneficial. With either of these salts a general tonic plan may be enjoined, and the bitter infusions given in any quantity the stomach will bear. Quinine, or other preparations of bark, may be exhibited; iron is also occasionally of service; and the ergot would be likely to be beneficial.

Blundell recommends, both in active and passive idiopathic uterine hæmorrhage, which has not yielded to other treatment, that mercury should be given to the induction of slight salivation; and states, that he has seen some instances in which the discharge was stayed when the mouth became sore. In obstinate cases, where the other more ordinary means have failed, I should not object to this practice; but think it would be advisable to inform the patient of our intention, that she might not suppose we had salivated her unexpectedly or unnecessarily.

Some practitioners, indeed, consider it dangerous suddenly to put a stop to hæmorrhages from the uterus, to which the patient has been habituated for some time; —looking upon them as constitutional, they fear a determination of blood to some particular organ might follow the suppression of the accustomed evacuation; as we sometimes observe to take place when periodical bleedings from piles are suspended. We have been recommended by Lisfranc, in such a case of injudicious interference, as soon as any unfavourable symptom shews itself, to relieve the sanguineous system by the abstraction of blood; to apply leeches to the vulva; and even to excite a contra-irritation, by inserting a seton in the inside of one or both thighs. Such observations cannot apply to cases where the danger from the discharge is imminent and immediate; and the latter means is a remedy which I should not judge likely to be productive of much advantage.

In Dr. F. H. Ramsbotham's last lecture, p. 339, l. 6, for "*coronal* suture," read "*sagittal.*"

ON THE EFFICACY OF

THE SECALE CORNUTUM IN HÆMORRHAGES & LEUCORRHŒA;

AND ON ITS

EFFECTS IN GONORRHŒA.

By G. Negri, M.D.

[Concluded from page 370.]

ON THE EFFECTS OF THE SECALE CORNUTUM IN GONORRHŒA.

About the *modus operandi* of the secale cornutum in leucorrhœa and menorrhagia, Dr. Spajrani expressed his opinion in the following way, leaving, however, this subject for subsequent inquiries:—

"I am," says he, "rather inclined to believe that this remedy does not act either as an astringent or as a stimulant, but more as a sedative on the capillary vessels; and for this reason it may be conveniently used in certain instances of active hæmorrhage and of vascular congestion, where there exists a state approaching very much to inflammation; but yet it is not to be used in instances where some acute inflammation is present, for which stronger means must be employed." With the view of ascertaining these therapeutical principles, and from the advantage already obtained by the ergot of rye in leucorrhœa, we thought to incur no great risk by trying it also in gonorrhœa, at first in females, and then, if not injurious, in males. It is true that the preternatural secretion of the mucous membrane of the genital organs in gonorrhœa is induced by a specific virus; but still we readily believe that its essential pathological character is inflammatory.

Therefore no better opportunity could be obtained for ascertaining the supposed *modus operandi* of the secale cornutum, than to use it in a disease of acknowledged character, and in which we could actually see the effects which might be induced by it.

The following cases will give an idea of the result of our inquiries on this subject:—

Case I.—Mary C., married, admitted to St. John's Dispensary on the 9th of May, 1833. She has been ill with gonorrhœa for about three weeks; she caught the disease from her husband, and had been under our care some

months ago for a similar complaint, induced by the same cause. She complains of shooting pains through her womb and loins, with *ardor urinæ*. She has been regular three weeks ago, and has never been subject to leucorrhœa. An opening medicine was ordered, and she was directed to take afterwards vj. grains of the secale three times a day.

May 13th.—She is a great deal better; has now no discharge. Had no giddiness, but only pains in the lower part of the abdomen, and a kind of cramp of the womb. Feels still pain in making water. The same powders to be taken only night and morning.

20th.—No discharge; complains still of shooting pains in the womb. Secale suspended, and only some supertartrate of potass to be taken as an imperial drink. On the 29th she was taken unwell, but the catamenial discharge was very scanty and pale; after which, on the 6th of June, she had a slight return of the discharge, which was gradually arrested by the secale in moderate doses. She was discharged cured on the 25th of July.

Case II.—Mary Ann C., æt. 26, single, admitted on the 9th of May, 1833. Has had gonorrhœa for nearly two months: has not been regular for several months, and has been subject to leucorrhœa. Bowels regular.

Six grains of the Ergot of Rye were ordered to be taken every four hours.

May 13th.—The discharge ceased after having taken four or five powders, and has not returned since. Suffered no inconvenience by taking her powders; they were ordered to be taken only night and morning.

30th.—She had been menstruating on the previous day, and was left without medicine.

June 6th.—Has no discharge at all, and she says she is quite well. Discharged cured.

Case III.—Harriet R., æt. 27, married, admitted on the 20th May, 1833. Has had gonorrhœa four years ago, of which she was perfectly cured. She was taken ill again with the same complaint, caught from her husband, about ten weeks ago, for which she has been treated, as an out-patient at St. Bartholomew's Hospital, under Mr. Lawrence. Balsamic medicines and mercurial pills were given to her, from which she was much relieved. Now the discharge is thin and white, when before it was yellow and thick. Complains still of some starting pains through the womb, but has less pain in making water. Complains of pain in her right leg, where there is inflammation of the periosteum, on the shin bone, probably of a syphilitic character. Her bowels being costive, a cathartic powder was ordered, and five grains of the secale cornutum to be taken every fourth hour, beginning the following morning.

May 23d.—The discharge is less: she feels sick after having taken her powder, and complains of being very weak. Pergat.

30th.—The discharge is less than on the preceding day of attendance. She has now no pain in making water, but continues to feel sick after taking the powders. Has had no giddiness.

Continue the powder three times a day.

June 6th.—The discharge has ceased. The secale was suspended, and the mercurial treatment was adopted, for what we thought a syphilitic complaint.

Case IV.—John F., æt. 40, a baker, admitted on the 21st June, 1833. Has had gonorrhœa about six times: it usually resisted every remedy, and once he had it for nine months. Now he has had gonorrhœa for about three weeks: has great pain and scalding in making water, and generally some drops of blood follow. Has a great deal of discharge, and the orifice of the urethra is redder, and swollen. In the night he has painful erections.

Five grains of the secale cornutum to be taken every four hours.

June 22d.—We saw again the patient. He has taken five powders. The discharge has not abated, but he thinks he has less pain in making water. Pergat.

28th.—He has taken about sixteen powders. He has no pain in making water. He has had still painful erections at night, but the opening of the urethra is a great deal less red, and the discharge considerably abated. He has now no inconvenience except a very slight feeling of warmth in making water. He continued the medicine in ten-grain doses every four hours until the 11th of July, when he was nearly well, and requested to be discharged.

This patient was under Dr. Ryan's

care, and was repeatedly seen by ourselves and colleagues.

Case V.—William M., æt. 24, admitted on the 22d of August, 1833. Has had gonorrhœa about twelve months ago. Has now been ill, for the second time, with the same complaint, for a fortnight. Discharge copious, yellow, and thick.

Five grains of the secale cornutum to be taken every three hours.

August 26th.—Is just the same, but does not feel worse. Pergat.

Sept. 2d.—He is a great deal better. Pergat.

12th.—Discharge scarcely perceptible.

Continue the powders, but only one three times a day.

16th.—Discharge almost gone. Pergat.

He went on taking his powders till the 10th of October, when he asked for another dose of them to be taken night and morning, having still some little discharge only in the morning. This patient, who was very attentive, and appeared much satisfied with his powders, having not returned, we have a good reason to believe he is now doing very well.

Case VI.—William S., æt. 28, admitted on the 4th of September, 1833. Was taken ill with gonorrhœa a week ago. Feels great pain in making water: discharge copious, yellow, and thick.

℞. Pulv. Secalis Cornuti, gr. iii q. h.s.

Sept 16th.—Discharge thinner; pain in making water gone. Pergat.

23d.—Discharge increased. Secale suspended, and prescribed the Mistura Balsamica.

Oct. 7th.—Discharged cured.

Case VII.—Only a few days ago we had in private practice a patient affected with gonorrhœa for the first time. The symptoms were not severe; the discharge moderate. Being an individual of a delicate constitution, and of very regular habits, we expected to do him some good in this case with the secale cornutum.

Three grs. of Battley's Extract were ordered to be taken every three hours.

The following day the discharge appeared a great deal less, and the remedy was continued. Two days afterwards, the discharge increased, as well as the *ardor urinæ*, and he had painful nocturnal erections. The remedy was brought to five grains every three hours, but was soon afterwards suspended, and other means adopted. In this case the secale cornutum certainly increased the severity of the symptoms; and the discharge, which was moderate at first, and thin, became afterwards copious, thick, and sometimes tinged with blood. The pulse was also feverish, and sharp; the skin warmer than naturally. This patient is of a very costive habit, but has great aversion to take purgatives. Had we used them previously, or simultaneously with the secale, we could perhaps have obtained a better result. This was necessarily done after we had resorted to the other usual means generally employed for that complaint.

SHORT NOTES OF OTHER CASES, BY DR. RYAN.

Case VIII.—M. M., æt. 22. Has contracted gonorrhœa from her husband; became a patient under my care at St. John's Dispensary, Sept. 12th, 1833. Has been two months ill.

She was ordered ʒiss. Secale in twelve powders, one to be taken three times a-day.

Sept. 16th.—Discharge nearly gone. To continue.

23d.—Discharge has entirely ceased.

Case IX.—Charles C., æt. 22. Has suffered from gleet for six months. Commenced the secale Sept. 17th, 1833, and on the 23d was nearly well. He has taken a variety of medicines, but nothing stopped the discharge so rapidly as the powders.

Case X.—G. S., æt. 34. Has been six months affected with gleet. He commenced the secale Oct. 30th: took twenty-four powders without any benefit. This was a morning patient, and had the medicine of a druggist, and perhaps it was bad.

Case XI.—A. B., æt. 34, has suffered from gleet for eight months. He was cured by 12 doses of the secale cornutum.

Case XII.—T. A. H., æt. 19, applied to me, November 5, 1833. Has has had gonorrhœa for the first time. Symptoms severe. Ordered the secale.

November 8th.—Discharge more co-

pious. Ardor urinæ severe. Secale omitted.

Ordered Carbonate of Soda in barley-water, or linseed-tea, &c.

In this case I did not expect much benefit from the secale, but was resolved to try it. Every medical practitioner is aware that a first gonorrhœa is much more severe and indomitable than when the patient has had the disease frequently, or when the acute symptoms have ceased. But as I have known cubebs repeatedly arrest gonorrhœa in the acute stage, I saw no objection to employ the secale cornutum.

From the above facts it appears to us quite evident that the secale cornutum has a peculiar action on the mucous membranes; but if exhibited when there is a state of acute inflammation, their morbid secretions may be considerably increased: on the contrary, when a more chronic form of inflammation does exist, the secale cornutum may have a beneficial influence in arresting their preternatural discharge.

These deductions being in perfect accord with what has been already remarked, on the efficacy of the ergot of rye in hæmorrhages and leucorrhœa, we think Dr. Spajrani's assertions on this point pretty correct. If any sedative or anti-stimulant property on the capillary vessels of the mucous membranes may be ascribed to the secale cornutum, as Dr. Spajrani is inclined to believe, we do not know. It is true, that in Case IV. of gonorrhœa, where redness and swelling round the orifice of the urethra existed, these appearances subsided under the influence of the secale, and that in some instances of hæmorrhage the patients were complaining of great general prostration and faintness; but others, on the contrary, felt stronger, and their pulse appeared to us more excited; when in VII. and XII. cases of gonorrhœa, the inflammatory symptoms were considerably increased. Are some of the former symptoms to be ascribed to the narcotic influence on the nervous system, rather than to any real sedative property of this remedy? We are inclined to believe so. We were much pleased to find out that MM. Trousseaux et Maisonneuve are of the same opinion on this point.

Now to give a more satisfactory idea of our result on the employment of the secale cornutum in hæmorrhages and leucorrhœa, we put down *all* the different instances of hæmorrhage and those of leucorrhœa in the following tabular form, indicating the result of *all* the cases of hæmorrhages and leucorrhœa which came under our observation from the 16th of April, 1832, to the 4th November, 1833, and were treated with the secale cornutum.

Different forms of the Disease.	Total number of Cases.	Successful Cases.	Unsuccessful Cases.	REMARKS.
Menorrhagia - -	12	8	4	* We include in the whole number the case treated by Dr. Macmichael, at the Middlesex Hospital.
Hæmorrhage from the rectum - - - -	2	2	0	† We put down as an unsuccessful case, the first attack of the disease of Elizabeth Pilcher (Case VI.), although, on the second, the secale turned out very beneficial, when given in a proper dose.
Hæmatemesis -	4*	3	1†	
Epistaxis - - -	1	1	0	
Hæmoptoe - - -	1	1	0	
Leucorrhœa - -	10	7	3	
Total - - -	30	22	8	

Note.—We did not put down in this table the cases of gonorrhœa, because they were related merely to shew the *effects*, and not the *efficacy*, of the secale cornutum on that disease. All we can say, from the limited number of observations on this subject, is, that perhaps the ergot of rye may be found of some service in the more chronic form of that disease.

Of the unsuccessful cases of menorrhagia, the first was a woman who had a copious loss of blood from the vagina, with great tenderness at the lower part of the abdomen, and pains round the groins and loins. Her pulse was such as would have induced us to bleed her, had we not wished to try the secale cornutum in this case; which was the second that came under our observation since we began to employ this remedy. Five grains of this remedy were ordered to be taken three times a day. The powders were continued for three days, but the pains and loss of blood were considerably increased. They were suspended, she was bled from the arm, and astringent medicines were ordered, which cured her very soon. This unfavourable result led us to adopt another mode of practice in the following case (the second of those related to the Society), which succeeded very well—viz. to bleed first, and then give the secale.

The second was a stout woman, who, at her regular period, was taken ill, but the bloody discharge was very profuse, and went on more or less for nine weeks. Had great pains in the lower part of the abdomen and round the loins. Her pulse appeared weak. Five grains of the secale were ordered, to be taken every second hour. Three days afterwards, she was not better, and felt an increase of the pains after taking her powders. Her pulse was stronger. She stated having had a miscarriage about four months ago. She was bled, and directed to take the secale only three times a day; from which she felt worse, and it was then suspended, and other means adopted.

The third case was that of Sarah Jones, æt. 33, married, admitted September 2, 1833. Has had five children, and miscarried twice; the second time five weeks ago, at which time she lost a great deal of blood. Three weeks afterwards, finding herself better, she started from some place in the country and came home home to London, a distance of 80 miles. She was taken ill again on her journey, and lost a great deal of blood. She continued so, more or less, till August 31st. On the 1st of September the hæmorrhage became very violent, and she came to our Dispensary the following day, and was under our care. She does not complain of any great pain, but in her left iliac region and loins. Her complexion is very pale, and there is great action of the heart and arteries; but her pulse is certainly weak and empty. Her head feels heavy; her bowels are costive.

℞ Pulv. Secalis Cornuti, ʒiij. divide in Pulv. xxiv. Pulv. j. 3tia quaque hora sumen. viz. about 7 grains every three hours.

A mixture, with a drachm of carbonate of magnesia and two scruples of rhubarb, in six ounces of water, was also given—a wine-glassful of which was to be taken every night, or night and morning, if her bowels were not open.

Sept. 5th.—She was sick, and vomited twice after taking the first powders, but felt only a sense of sickness afterwards at each time she took her powders. Had some giddiness, but the pains in her loins and side were relieved. The bloody discharge is reduced very much, and she states that it was so soon after having taken a few of her powders. Bowels regularly open. Soon after having taken a powder, she feels "a general sense of weakness all over, from the head to the tip of her fingers and toes, as if she could not stand; then she feels sick." Action of the heart and arteries less violent; pulse more natural.

The mixture to be continued, and the powders to be taken only every four hours.

12th.—She is better; discharge very much diminished, and less coloured. The powders continue to make her sick and weak.

Continue with powders.

16th.—Feels very sick with her powders; discharge a great deal increased; but she thinks her time to be unwell is very near. The secale was discontinued, and she was gradually doing well under the use of the following pills:—

℞ Ferri Sulph. gr. i.; Ext. Rhei, gr. iij. M. ft. pil. ter die sumend.

These pills were continued until the 7th October, when she was discharged cured. Under these remedies, the palpitation of the heart and the excessive arterial action were reduced to their natural standard, and the patient got soon

better from that sense of general prostration of which she complained so much before.

Although we put down this with the *unsuccessful* cases, still we thought that, properly speaking, it should not have been considered entirely so, for the hæmorrhage increased in consequence of her having taken the secale when near her period of menstruation. This was the reason which induced us to say in another place, that "only in two *or three* cases of menorrhagia the loss of blood was remarkably increased by the action of the remedy."

The Fourth unsuccessful Case of menorrhagia is that of Mary Ann May, aged 22, married, admitted the 4th of November, 1833.

She had miscarried a short time ago, and was labouring under profuse menorrhagia for several days. Was complaining of pains in the lower part of the abdomen and loins. She is a thin and delicate-looking woman: her pulse appeared to us rather weak.

Five grains of the secale cornutum were ordered to be taken every two or three hours.

Nov. 7th.—She has been much worse: the hæmorrhage increased very much, with spasmodic pains in the hypogastric region, and had giddiness, and pains along her thighs and legs. She took only six powders, and as soon as she left them off the pains decreased. Her pulse was quick and sharp, but empty. Her bowels are rather costive. The following mixture was ordered:—

℞ Magnesiæ Sulphatis, ℥j.; Antimonii Tartarizati, gr. ii.; Aquæ Fontis f. ℥viij. M. Cyath. parvul. j. bis terve die sumend.

21st.—After the first glass of her medicine, she vomited several times, after which the hæmorrhage suddenly ceased, and she felt a good deal better: this was the reason she did not attend before. Now the hæmorrhage returns a little, if she has to exert herself too much.

The secale cornutum was again ordered to be taken, only two or three times a day.

25th. — The hæmorrhage entirely ceased last Thursday evening (21st,) after having taken one of her powders, which she continued taking till to-day. She felt some pain in the lower part of the abdomen, but a great deal less than at the first time she took them*.

In using the secale cornutum, we preferred to give it in powder, as Dr. Spajrani did, being also the most economical and convenient way in a Dispensary practice. We seldom ordered it in more than five or six-grain doses, more or less frequently repeated, according to the violence of the case, or the peculiarity of the concomitant symptoms. We purposely avoided to give the secale intermixed with other medicine; but we were sometimes obliged to modify by other means the morbid condition of those parts or organs over which our remedy had to exert its powerful action; when at other times it was necessary to get clear of those irritating causes which would have counteracted its beneficial influence; as, for example, the employment of purgatives, when the bowels were costive. This, however, can never be an objection to our practice, as that must be always the case with the administration of any other remedies, which are given with a peculiar object. Although the criterion of the *post hoc, ergo propter hoc*, be not always correct, still we believe that, in our profession, when violent symptoms are present, and we employ remedies of acknowledged activity with the view of curing them, if we obtain a favourable and constant result for a sufficient number of times, we may begin to believe that criterion sufficiently correct. The weight of such a conclusion is moreover increased by the uniformity of results obtained by different individuals, and in different countries. Therefore the following comprehensive view of the general results of the secale cornutum in hæmorrhages and leucorrhœa, will perhaps leave a more striking impression of the real efficacy of that remedy in the treatment of those classes of diseases.

[*The table referred to will be found in next page.*]

* This case, which came under our observation some time after having written the first part of this paper, was not there mentioned.

TABULAR EPITOME *of all the* CASES OF HÆMORRHAGE AND LEUCORRHŒA, *which came to our knowledge since* DR. SPAJRANI'S *Publication, cured by the* SECALE CORNUTUM, *by different Practitioners in Italy, France, and England.*

Where, and by whom, treated.	Total number of Cases.	Different kinds of Hæmorrhages: from the							LEUCORRHŒA.	Where published or recorded.
		Womb.	Nose.	Chest.	Bladder.	Stomach.	Rectum.	Gums.		
In ITALY.										
Dr. Spajrani	17	8	2	5	2	..	..	..	(*)	Omodei's Annali, for March 1830; Lancet, February 5th, 1831.
Dr. Pignacco	4	2	..	2	..	..	..	..	..	Do. No. for May-June 1830; Lancet, do
Dr. Gabini	7	3	2	1	..	1	..	..	..	Do. No. for February and March 1831.
Dr. Bazzoni	8	..	..	..	..	..	..	..	8	Do. do.
In FRANCE.										
MM. Trousseaux et Maisoneuve	13	13	..	..	..	..	..	..	..	Bulletin Général de Therapeutique; Lancet, March 30th, 1833.
In ENGLAND.										
Dr. Marshall Hall	1	1	..	..	..	..	..	..	(*)	Lond. Med.-Phys. Journ. March 1829.
Dr. Lanyon	1	..	..	1	..	..	..	..	..	Lancet, for March 13th, 1833.
Mr. Bright	1	1	..	..	..	..	..	..	..	Do. for April 13th, 1833.
Mr. H. A. O'Slea.	(†)	..	..	..	..	..	..	..	..	Do. do.
Dr. Macmichael..	1	..	..	..	..	1	..	..	..	Dr. Negri's paper, CASE VII.
Dr. Negri	21	8	1	1	..	2	2	..	7	Do.
Mr. Nettlefold....	2	..	..	2	..	..	..	..	..	Do. CASES XII. and XIII.
Dr. Ryan.....	2	1	..	..	..	..	..	1	(*)	Do. CASES XIV. and XV.
Totals	78	37	5	12	2	4	2	1	15	

(*) We mean those who have used it successfully in this disease, but the number was not stated.

(†) Number not stated; but Mr. O'S. employed the secale in hæmorrhages for the last two years—"with invariable success."

CASE OF

STRANGULATED HERNIA:

ADVANTAGES OF DIVIDING THE STRICTURE EXTERIOR TO THE PERITONEAL SAC.

To the Editor of the Medical Gazette.

SIR,

I should feel extremely obliged by having the following case published in an early number of the Medical Gazette, as it most fully exemplifies, not only the practicability of dividing the stricture in strangulated hernia exterior to the peritoneal sac, but it also establishes, in my opinion, the great advantages which may be derived from this mode of operation, as proposed by Mr. C. Astley Key.—I am, sir,

Your obedient servant,

BRANSBY B. COOPER.

New-street, Dec. 4, 1833.

Rebecca Watt, æt. 41, an unmarried woman, of irritable disposition, was admitted into Esther ward, Nov. 20, 1833, with symptoms of strangulated hernia.

She states that ten years ago she had a child, and that since that time she has been frequently subject to spasmodic pains of the bowels, occasioned, as she describes, by accumulations of flatus. About five years ago she perceived, while in bed, a small tumor, about the size of a walnut in her right groin: it was soft to the touch, and readily returned into the cavity of the abdomen by gentle pressure. This tumor would occasionally descend, and as quickly disappear, without giving any trouble; she, therefore, did not consult any one upon the subject. About four years ago, without being able to attribute it to any apparent cause, a similar swelling appeared on the left thigh, and which she was able to push back into the abdomen, although with rather more difficulty than the swelling on the opposite side. In this state she continued, frequently having the hernia descend, but unattended with much inconvenience until Tuesday, the 19th of November, when, after a day of hard work, the tumor on the left side became irreducible, and so painful that she could scarcely stand in the erect posture; her bowels became at the same time constipated. The next morning, feeling herself no better, she fomented her abdomen with warm water, which seemed for a time to relieve the urgency of her symptoms, and she took a dose of castor oil, but which she immediately rejected from her stomach.

Nov. 20th.—The bowels not being relieved, and all her symptoms remaining, attended with insuperable constipation, she applied at Guy's Hospital for relief. On admission, she complained of pain over the whole surface of the abdomen, with constant sensation of nausea; the tumor on the left side was about the size of an egg, and very tense; pulse 96; with some little anxiety of countenance. Attempts were made to reduce the hernia: the taxis not succeeding, ice was ordered to be applied, but which produced no change for the better; and at 8 o'clock, P.M. six hours after admission, the operation was proposed, and immediately acceded to. The details of the operation need not be related, as it was performed in the usual manner, until the sac was exposed, which was found still as tense as when covered by the skin, superficial fascia, and fascia propria: the director was then passed between the fascia propria and hernial sac, and the stricture freely divided; upon which the sac became immediately flaccid, indicating the passage of part of its contents into the cavity of the abdomen, when, by applying a gentle pressure, the whole of the tumor disappeared.

The patient immediately expressed herself relieved, and seemed totally free from all those symptoms of collapse which usually attend the common operation on strangulated hernia, in which the peritoneal cavity is opened.

The edges of the wound were then brought in apposition, and retained there by sutures. She seemed to suffer but little from the operation, her pulse being still but 96, full, compressible, and regular. She was then placed in bed, and desired to be kept perfectly quiet, and to take no medicine until it might be considered requisite.

Nov. 21st.—Has slept during the night, the bowels have been copiously opened, countenance natural, pulse 96 and regular, and makes no complaint beyond an uncomfortable sensation from frequent eructation; she may in fact be described as being free from any unfavourable symptom.

To detail the supervening symptoms, from the period of the operation to the present moment, would be tedious, as she had no symptom beyond what would be expected from the return of a strangulated hernia by the application of the taxis, excepting a discharge from the wound, which is now nearly healed by granulation, and she may be pronounced in a state of convalescence. If there be any fact worthy of notice, it may be the torpid state of the bowels, which have required the frequent administration of purgatives, but which, however, have invariably acted as desired.

I may mention, however, in justice to this mode of operating, that the patient was far from being one favourable to the hope of recovery, being exceedingly irritable, and from her habits, as the servant in a public-house, very liable to be excited, without much constitutional power to resist its ill effects.

It has been maintained by some critics, that there are not as yet a sufficient number of cases to establish this mode of practice; and they perhaps found their opinion upon the fact, that it is an operation which was formerly recommended, and has subsequently been abandoned; therefore requiring some very efficient reason to show, why it should be again

adopted. This, I think, may be made evident, when we consider the early period at which this operation was first proposed,—a period when little or nothing was understood of the fascia transversalis, or the arrangement of the fibres of the transversalis muscle—parts as essentially connected with all the phenomena attending this disease as with the minute anatomy of hernia.

It is in consequence of the discovery of these structures by Sir Astley Cooper, then, that this plan may now be adopted upon *principle*, as it is proved that the real seat of stricture is much more frequently dependent upon them, than upon the hernial sac: and although our predecessors may have discovered, in the progress of operating, that the stricture had been removed, without opening the peritoneal sac, still they must have remained ignorant of the true cause of the strangulation, they had thus, as it were, by accident relieved.

Although this plan has both been adopted and recommended by Sir Astley Cooper, still I feel to Mr. Key it is to be attributed, the recommendation of attempting it in all cases of hernia; as he considers it to be a mere modification of the taxis, and that it converts an operation, formidable from the opening of a large serous cavity, into a "simple incised wound of the abdominal parietes."

An objection has been made to this mode of operating, from its preventing the opportunity of examining the real state of the contents of the hernial sac. To this Mr. Key very properly replies, who would hesitate to return a strangulated hernia by the employment of the taxis, unless, indeed, there were some external signs of such disorganization of the intestine as would render its reduction unsafe?

In this view I perfectly agree with my colleague, believing that the appearance of the hernial sac, and the feel of its contents through it, will always enable the surgeon to form nearly as correct a judgment in this mode of operating as if he could actually see the parts: at any rate, that the additional evidence is too dearly purchased by opening the peritoneum.

Nothing could be more convincing of the truth of this view, than the appearance of the patient above alluded to, as contrasted with the alarming symptoms invariably concomitant with the usual mode of operating.

I have operated for stangulated hernia at least thirty times, and never saw any case, however successfully the operation went on, in which the patient did not undergo a considerable change upon the opening of the hernial sac; indicating the symptoms of collapse more or less severely, and too frequently terminating fatally, by producing a peculiar inflammatory state of the peritoneum, over which the surgeon has little or no control, as the patient is liable to sink from the remedies necessary to subdue the action. I believe I may say that my practice has not been less successful than that of other surgeons in this metropolis, where the common mode of operating has been followed; nor can I think that the continuance of that mode will ever lead to happier results: and, on the contrary, I consider that when the contents of a hernial sac can be returned, without opening the peritoneum, the patient will be exposed to no greater danger than when the taxis alone has been employed. It is true, that in some cases of old herniæ, the surgeon may not be enabled to empty the sac by this operation, or he may be enabled only to return a part of its contents: in the first case, he can still adopt the old plan, without having exposed his patient to any farther risk; and in the second, it is for him to decide whether or not the portion of the contents of the sac which he has returned, has been the part strangulated; thus rendering the operation sufficient. This point may require considerable nicety of judgment; but should a doubt remain, the patient must be carefully watched, and if the symptoms of strangulation continue some hours unrelieved, the surgeon may finish the operation by opening the sac; as the patient will have sustained no additional injury from the previous steps adopted.

Another circumstance which, in my opinion, may lead to the establishment of this operation, is the advancement which has been made in the pathology of the different tissues; leading to the fact that it is on the adherent, and not on the free or secreting surfaces of the serous and mucous membranes, which inflammation usually commences; and therefore the cause of stricture is more frequently on the external than on the internal side of the peritoneal sac.

This mode of operating may not obtain converts so readily as it deserves;

for it requires a perfect knowledge of the anatomy of the parts to be enabled to define each distinct layer, and recognize the peritoneal sac when exposed; whereas, in the common operation, little more need be known than the appearances of the intestine and omentum, when their coverings are removed.

ANATOMY OF HERNIA—MR. GUTHRIE'S CLAIMS.

To the Editor of the Medical Gazette.

Sir,

In the last number of your journal a "Lecturer on Anatomy" takes up the subject of the discussion between Mr. Guthrie and Mr. Key, desiring to assist your readers in getting "at the chief point in dispute," and apparently to assign to Mr. Guthrie his due proportion of merit, as far as the anatomy of inguinal hernia is concerned.

"The chief point in dispute" is said to be the question, "what are the precise boundaries of the spermatic cord immediately on its entrance from the abdomen into the inguinal canal?" To this I do not object. It is stated by "a Lecturer," that Mr. Guthrie's "observations lead him to describe four varieties in the relation of these parts." In his work on Hernia Mr. Guthrie does not—at least distinctly—do this. In his letter replying to one of Mr. Key's, he does so, though not from his own "observations." Two of the varieties alluded to are ordinarily described; the third belongs to Sir A. Cooper; and the fourth is claimed by Mr. Guthrie as his discovery. The Lecturer on Anatomy says, that it "does not appear that he may not justly lay claim to it;" and afterwards calls Mr. Guthrie's description "an observation peculiar to him."

On the difference between Messrs. Guthrie and Key I shall say nothing; I propose confining my remarks almost altogether to this question — is Mr. Guthrie's claim to the discovery, which is allowed by "a Lecturer," just or not?

Mr. Guthrie's object appears to be chiefly to shew, that muscular action often produces stricture in cases of inguinal hernia, and with this view refers to the anatomy of two muscles—the internal oblique and transversalis. In order to give the reader a clear view of the state of our knowledge of these parts before the period at which his lecture was delivered, he quotes, with the utmost apparent fairness, the descriptions of the best authorities. On this point he says, in his reply* to Mr. Key, "this summary (of opinions) is followed—the reader will be surprised to hear—by translations made by myself from the works of Cloquet and Blandin, with passages in particular pages of Velpeau, occupying three pages; which translations are not to be found in any other book in existence but my own," &c.

Being, like your correspondent, "engaged in directing the anatomical pursuits of some of the rising generation of operating surgeons," I consider it, and have considered it, my duty to be closely acquainted with the works of authors of repute, especially on a subject of such importance. It so happened that I attended Mr. Guthrie's Lectures on Hernia at the College of Surgeons, having previously heard it noised that he was about to give new views of the anatomy. I was astonished to hear, in one of the lectures, a variety in the disposition of the transversalis mentioned as if it were the ordinary condition of that muscle, and still more astonished to hear Mr. Guthrie state to be his discovery that which I had read several years previously.

But, to the point: in Mr. Guthrie's book the extract from Cloquet begins at page 13 of the French writer's essay, and ends with the same page. The quotation correctly makes Cloquet say, that the spermatic cord slides beneath the inferior fibres of the *internal oblique* muscle; it is omitted to be stated that it is further said at page 18, "In most subjects the cord passes beneath the muscle, and draws with it some fibres to form the cremaster, whose arches are then only in front of it; in other cases, however, the cord passes evidently *through the muscle*, and then the arching fibres of the cremaster are not only in front, but also behind the cord." On the same subject Scarpa† says, "The lower muscular fibres of the internal oblique separate from each other, to allow the spermatic cord to pass *between* them." Mr. Guthrie's statement of the result of

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* Med. Gaz. for Nov. 16.

† On Inguinal and Scrotal Hernia, English edition, p. 25.

Cloquet's researches on the anatomy of the internal oblique is, then, incorrect. Are not the omissions material? Might not the fact of a hernia having passed through the fibres of this muscle cause stricture?

Again, as to the transversalis, "the chief point in dispute," Mr. Guthrie gives a short extract from Cloquet, consisting of the concluding part of one paragraph, and the commencement of another. This, as far as it goes, is correct; but by reading to the end of the paragraph — three lines of which are translated by Mr. Guthrie — we find a description of that very "variety," to the discovery of which he lays claim — a claim allowed by "a Lecturer on Anatomy."

Mr. Guthrie writes thus (p. 13), "In the demonstration of these parts in the theatre of the College of surgeons, I had the opportunity of shewing the transversalis muscle advancing fleshy or muscular until it reached the spermatic cord; a portion of it then took the usual course above and over it, whilst another portion passed below it," &c. Again, "the spermatic cord passed not, as is usually stated, under the inferior edge of the transversalis muscle, but through a slit in it," &c. M. Cloquet says (p. 23), "The spermatic cord merely slides beneath the lower margin of the transverse muscle, opposite the superior opening of the inguinal canal." Here Mr. Guthrie's extract ends. M. Cloquet next alludes to an opinion of Scarpa; and in a note says, that he had seen the lower margin of the muscle at a very considerable distance above the internal ring. The following words next occur:—"I have also seen the spermatic cord enter the inguinal canal passing *between the fibres* of the transverse muscle, which (fibres) were only separated without accompanying it (the cord), as those from the internal oblique do.

Mr. Guthrie speaks of four varieties. One of these is wholly in possession of Sir A. Cooper; two others are mentioned by many writers; the fourth may be seen to be described in a work written sixteen years ago. I apprehend then, sir, that I am justified in refusing my assent to the award of discovery made, "quasi ex cathedrâ," by a "Lecturer on Anatomy" to Mr. Guthrie.—I am, sir,

Your obedient servant,

A Teacher of Anatomy.

Dec. 2, 1833.

ANALYSIS OF CHOLERA BLOOD.

To the Editor of the Medical Gazette.

Sir,

In a late number of one of the journals, I find a communication from Dr. Clanny, of Sunderland, on the chemical diagnosis of cholera; and he sets out by stating as his opinion, that there is no certain method of distinguishing the slighter cases of epidemic cholera from severe cases of sporadic English cholera, unless recourse be had to the chemical analysis of the blood;—and, acting on this opinion, when he is called to a doubtful case, where the patient is labouring under most excruciating spasms of the legs and thighs, with vomiting and purging of very *pale* evacuations, together with cold extremities—what does the doctor do? why, instead of attacking this host of alarming symptoms, and expelling the enemy *vi et armis*, he draws some blood from the patient's arm, submits it to an elaborate analysis, and then administers his remedies, leaving the patient, perhaps, in the clutches of the grim tyrant, while the process of analysis is going on. This practice may, perhaps, succeed in Sunderland, but in London would not, I fear, be attended with much success. With all due deference, I would suggest to Dr. C. whether it would not be a safer and better practice to administer a grain or two of solid opium, whether the disease be of the epidemic or sporadic form of cholera, without waiting for the accession of more formidable symptoms, or for the results of analysis, to determine the precise disease, even if this be practicable, which I much doubt. And here I would, *en passant*, congratulate the worthy doctor on his tact of manipulation in the performance of chemical analyses, by which he is able to finish so complex an analysis as that of the blood in two hours, and to arrive at the following results; namely, in 1000 grains—water, 754; albumen, 123; colouring matter, 61; free carbon, 32; fibrin, 17; salts and animal extract, 13 grains; and 1·32 cubic inches of free carbonic acid, in ℥xx. of blood. These results were obtained from the examination of the blood drawn from a patient labouring under the symptoms previously alluded to, whence Dr. C. concluded that the blood was *excellent*.

This analysis was performed in two hours, in a room adjoining the patient's: (by the by, Dr. C. forgets to mention the time occupied in sending home for his apparatus and re-agents.) If Dr. C. means by the words *excellent blood*, healthy blood, I can assure him that blood in London and Sunderland must be very different, whether healthy or diseased, for the *proportions* of each constituent not only differ, but he sets down 3·2 per cent. of free carbon as existing in healthy blood. Now, sir, I can inform him, that no free carbon exists in any variety of London blood: perhaps the worthy doctor may be inclined to attribute the presence of free carbon in Sunderland blood to the proximity of that place to the collieries;—but, jesting apart, will Dr. Clanny favour us with the process by which he is able to separate free carbon, fibrin, free carbonic acid, &c. from blood in two hours? he would thereby confer an obligation on the medical profession, many of whom would, I dare say, desire a closer acquaintance with this expeditious mode of analysis.—I am, sir,

Your obedient servant,

GOLDING BIRD.

Guy's Hospital, Dec. 9, 1833.

ERUPTION OF THE TEETH.

To the Editor of the Medical Gazette.

SIR,

IN my brief, and I trust not uncourteous remarks, on Dr. Ashburner's "approximation towards the normal order of eruption of the first set of teeth," my only object was to communicate a fact with regard to which I believe the best authorities to be in error—viz. that the precedence of development, with the exception of the central incisors, is more frequently in the upper than in the lower jaw. I had been taught the reverse of this by the late Mr. Fox, in his lectures on the teeth, who gave the same order as Dr. Ashburner. Every author I have met with supports the same opinion; and the analogy of the second dentition still farther confirms it. But, notwithstanding this weight of testimony, it is impossible to discredit the evidence of one's own senses; and continued observation for several years past—not limited, as the doctor would infer, to unhealthy children—tends to convince me that the table I have given is the more usual order of succession. I have also, since my last letter, looked into the mouths of various children, and seen lateral incisors, cuspidati, and molares, in the upper jaw, in advance of, or without the corresponding teeth below; and, strange to say, not a single instance to the contrary. Can all these be *anormal?* I argue not, however, for the term *normal;* and if it be applicable to that which is a deviation from the ordinary course of nature—to the exception, and not to the rule—I confess myself ignorant of its meaning. But I will venture to assert, that whoever may take the trouble to test the truth or fallacy of this statement, by examining any given number of healthy children, will find the same order of precedence to prevail in a considerable majority of cases; and it is frequently of no little value in practice to be able to predict to the anxious mother the probable order in which the teeth will appear.

Having no theory to maintain, no wish to take credit for my own observation, and still less to enter on the lists of controversy, I beg to subscribe myself (at your request only),

Your obedient servant,

JOHN HUNTER*.

Mincing-Lane, 10th Dec. 1833.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

A Compendium of Osteology: to which is subjoined, an Improved Method of preparing Bones. By GEORGE WITT, M.D. Physician to the General Infirmary, Bedford.

THIS is essentially a teacher's and a student's book, and we think is the first approximation towards rendering the study of osteology *interesting.*

The peculiarity of Dr. Witt's plan is that of a *consecutive* description, founded upon a consecutive *reading off* of the different parts of the skeleton, appropriately placed before the pupil's eyes. Any given bone is taken up; held in a given position, and its outline, its eminences, its depressions, its foramina, &c.

* We thank Mr. Hunter for giving his name; his statement, thus guaranteed, acquires an authority which the facts while they continued anonymous did not, and could not possess.—ED. GAZ.

are read off, like the page of a book. It is astonishing that so plain, so simple a plan, has not been adopted before; we can conceive at once how the mind may become interested by this mode of teaching a dry subject, yet the foundation of all anatomy, and how the memory may retain the lessons thus learned.

After briefly describing his plan, in a short preface, Dr. Witt proceeds to give his tabular views of the bones in details. These appear to us to be constructed with great care, and they will save the student much time, lost at present in reading paragraphs, when the mere enumeration of parts, with their situation, character, and use, only requires to be pointed out, the bone being before him, its aspects being first duly chosen, and then duly changed.

After the tables, we have a series of questions, which are drawn up with equal care and labour. We can readily conceive teachers and pupils, or pupils only, acquiring an accurate knowledge of osteology in this way, not in an unagreeable manner, and certainly in a way calculated to impress it upon the memory.

The etymology and synonymes are added, which also interest the inquiring mind, and impress the memory. In fine, we strongly recommend this neat and useful little volume to all engaged in teaching and in learning anatomy.

Dr. Witt has appended an account of a mode of preparing bones, retaining their perfect whiteness, which consists in allowing the putrefactive process to go on, until it is complete, without disturbing it, and consequently without changing the water, or allowing it to evaporate.

Obstetrical Tables; comprising coloured Delineations, on a peculiar plan, intended to illustrate Elementary and other Works on the Practice of Midwifery; elucidating particularly the Application of the Forceps, and other important practical points in Obstetric Science. By G. Spratt, Surgeon-Accoucheur, &c. London: Churchill, Princes-Street.

The desire of pointing out to the attention of the student whatever is calculated to facilitate his acquisition of knowledge, has induced us to notice several works analogous to the present. Those which we have hitherto mentioned have related to difficult points of anatomy, such as hernia, &c.—subjects which are unquestionably much more easily mastered by the beginner, with the aid of plans, which he can, as it were, dissect and replace at will, than by any other contrivance with which we are acquainted. Some of the more important and obscure parts of midwifery have received this kind of elucidation from Mr. Spratt, whose ingenious and well-contrived plans we have examined with great satisfaction. They represent the impregnated uterus and its contents under various circumstances, and are excellently contrived to fulfil the design for which they are intended.

Notice.—*Complaints having been made to us by various Correspondents, that the Gazette is not to be had till Saturday afternoon, we beg to state that it is* invariably *published at* nine o'clock in the morning. *The delay, therefore, does not rest either with us or with our Publishers.*

MEDICAL GAZETTE.

Saturday, December 14, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

THE ONE FACULTY—*INSTAR OMNIUM.*

The proceedings of the Westminster Medical Society, we are glad to find, were somewhat more rational and intelligible on the last night of meeting, with reference to the "one Faculty," than some of the speakers and their commentators had led us to expect. We thought, indeed, that a little time would be of much use in letting the effervescence subside, when, by blowing away a certain quantity of froth and scum from the surface, we should be the better enabled to judge of the quality of the spirit beneath; nor have we been disappointed. The business of Saturday evening consisted in passing a couple of resolutions relative to the encroachments of the chemist and druggist on the province of the general practitioner, and in proposing, but not in carrying—as was the case with

all the other questions—the resolution for "one Faculty or Academy of Medicine," to regulate the profession at large throughout the united kingdom; to decide which proposal a ballot is to take place this evening.

On the first of these measures there cannot be two opinions, so clear is its propriety. Every one in the slightest degree conversant with the state of the profession of late years must have seen with regret the unprotected condition in which the rights of the great body of general practitioners throughout England have been placed by the want of restraint—the perfectly unlimited power—enjoyed by chemists and druggists in assuming to act as general practitioners, prescribing and dispensing medicines to all applicants. The insufficiency of the Act of 1815, in this respect, has not only prejudiced the interests of those who have gone to considerable expense of time and money in qualifying themselves with the requisites of a regular education, but has endangered the lives of the community, by securing a sort of prescriptive right for the not more unwarrantable practices of charlatans of every description. That the chemist and druggist of this country, who is a mere tradesman, has no more right to prescribe medicine than a surgical instrument-maker has to perform operations, is, we hold, a proposition that cannot be disproved; and without an appropriate education, we maintain that, in presuming to practise, he is nothing better than any unqualified pretender or quack in the community*. The omission of a clause to the effect of restraining such persons, has proved a fertile source of mischief to the profession. The Society of Apothecaries did not secure any control over the dealers in drugs, and thus failed egregiously in being able to afford protection to the large class of practitioners, whose interests they were obviously bound to protect, inasmuch as they were constituted the regulating and governing body, on the faith of whose power in this way some thousands of respectable members of society were induced to embark their fortunes in the profession of physic. The Society have never attempted to prosecute any chemist and druggist for encroachments such as those we speak of, though we are informed that several prescribing druggists have been denounced to them; nor have they ever, so far as we are aware, endeavoured to procure an amendment of their act, securing to them a regulating or restraining power to be exercised over the obnoxious class.

This is a subject on which we conceive the general practitioners of England have a right to express themselves strongly; and it is impossible that they can ever be cordially satisfied with the rule and governance of the Society of Apothecaries, as long as the body that professes to guard the interests of the general practitioner sits tranquilly down without an effort to protect its licentiates and the public. It is idle to say that restraint of this nature is impossible; that people in distress and suffering, and agony, perhaps, from sudden accidents, will, as they constantly do, claim the assistance of the first chemist whose show of bottles attracts their eyes; and that to prescribe and dispense under such circumstances is a positive duty; that it would in fact be a criminal thing to do otherwise. In such cases, every body will admit, that restraint would be cruel — impossible — and as wanton as to attempt to restrain a mo-

* Just as the above was written, we read in the newspapers an account of an inquest, held last week at Sheffield, on the body of a child which died *after*, we will not say *in consequence of*, certain improper medicines ordered for it by a druggist. The evidence was insufficient to warrant a verdict of manslaughter, but the jury felt themselves called upon to censure, in strong terms, the conduct of the druggist, who had taken upon himself to prescribe without having any right whatever to do so. How many cases of this sort escape publicity, merely because they do not come under the cognizance of the coroner!

ther from tendering medical assistance to one of her children suddenly attacked with griping or convulsions. But in ninety-nine cases out of a hundred there is no such pressing neccssity for the druggist's interference; and it would be just as rational to rest a defence of swindling —in the case of those who inveigle dupes into their snares; impostors, for example, who profess to be commission agents, &c.—on the fact, that when the said dupes find themselves in difficulties, they apply to any one that comes in their way, and it would be cruel in such a case not to give them some sober advice. At all events, in every instance where injury is done to a patient, the utmost penalty of the law ought to be enforced; indeed it is disgraceful to the character of the community for common sense, that such sophistry as is abroad on these points should so long have been allowed to pass current, and persons suffered to exercise so important a calling as that of dispensing medicines, without any previous education being required.

If, however, the restraint in question be imposed on the class of chemists and druggists, this party will, on the other hand, have an undoubted right to claim a protection from the anomalous proceedings of certain general practitioners who, as nearly as may be, identify themselves with the mere traders in drugs, and often go farther, — having shops as showy, and selling perfumery, and a variety of other things which have nothing to do with medicine. As long as general practitioners do not, as a body, set their faces against such petty trading and improper conduct on the part of their brethren, their charges against the class of chemists and druggists must fail of half their weight.

We will now pass to the other business of Saturday evening—the resolution read on a former occasion, and now brought forward by Dr. J. Johnson, to set up one Faculty or Academy of Medicine, whereby the profession in this empire should be regulated, from its highest to its lowest grade. There were some very amusing things in the speech with which the resolution was introduced, which makes us rather regret that we have not a *verbatim* report of it before us; but what we do know of its substance may suffice for our purpose. We were really very anxious to understand what the Westminster Society meant by "one Faculty,"—for the phrase was, as usual, variously interpreted by various parties who had interests of their own to promote; but all agreed at least in one point — that of repudiating the "assimilation of the whole profession," so much insisted upon by our contemporary. It would fill too much of our space to give a sketch even of half the meanings attributed to the term by persons whom we were able to consult, but we are bound to say, that after all we have no where found any interpretation half so clear and intelligible as that put upon it by our worthy contemporary the *Lancet*. We alluded to this fact in our leading article of last week, and we gave an amusing anecdote from his pages, shewing at least what *he* meant by the establishment of one Faculty. Of course he construed the project of the society precisely in the sense that would serve him best for carrying on his own game, and upholding his "Collegium" at the expense of the profession. How eagerly did he seize on the term "one Faculty," to make it appear that the object of our medical reformers was to abolish all grades—all distinctions of various ranks—and to institute one uniform Utopian democracy of medicine! A scheme so wildgoose and wanton we were not slow in tracing to its proper source; but we confess we felt not a little indignant that any medical society in the metropolis, by the indiscreet speeches of some of its members, should leave any of its acts open

to so gross a misinterpretation. We can now, however, we fancy, better guess at the object of certain members of the Westminster Society—at least so far as Dr. J. Johnson may be looked upon as one of their principal mouthpieces. The resolution moved by this gentleman is couched in language clamorous for a single Faculty or Academy of Medicine; by which, it seems, is meant the establishment of one Medical College, in place of the *twelve*, which, as Dr. Johnson was pleased to say, at present prevail amongst us.

The learned gentleman, in the first place, dwelt on the propriety of proposing *no remedy* to parliament—of demanding nothing except a fair and full inquiry into the present state of the profession: the rest, he said, would follow of itself—the remedies would come in due season. He would, in short, strenuously recommend the Society to abstain from meddling with remedial measures: yet truly, if he might, he would just offer "a hint of an indication," and nothing more. Who could have expected from an exordium of this sort, that the peroration should end in a project like that just stated*?

But to proceed. Dr. Johnson, in another part of his speech, strongly protested, in his own name, and that of the Society, against the charge of their being "levellers." He would acknowledge, indeed, he said, that in one sense he was a leveller: *he* would level *upwards*—he would make the present maximum of education the minimum under the system that was proposed! Now this sounded, no doubt, excellently well in a speech, and was wonderfully calculated to tickle the ears of novelty-hunters. But if Dr. Johnson meant any thing more by it than a rhetorical flourish, and that he really has a plan in his head for performing so notable a piece of levelling, we cannot help thinking that it is very cruel of him to withhold the details of his project from the public. The maximum education required of the medical practitioner in this country at present is, we believe, that demanded for the fellowship of the College of Physicians: or if Dr. Johnson alludes only to the *medical* acquirements expected to be possessed by those who submit to the maximum ordeal at present, we suppose he hints at the courses required of candidates for degrees at Edinburgh or Dublin. Will the worthy doctor allow us to ask him one question? Does he mean to say, by his flourish about maxima and minima, that under his new medical millenium every candidate practitioner or candidate member of the Faculty will be required to possess an amount of education equal to that taught by the Irish and Scotch universities?—When the clamour ceases against the Society of Apothecaries for requiring *so much* in their curriculum, we shall believe Dr. Johnson answering in the affirmative; but not till then.

A right witty and facetious part of the doctor's oration was that in which he caricatured the three London Colleges, (Wakley's, of course, he held too sacred to mention,) describing the "chop" doctors of the College of Physicians—the anatomico-astrological functionaries of the College of Surgeons—and the drug-merchants of the "College" of Apothecaries: and when at last he finished his tour of the islands, flourishing his tomahawk at each of the *twelve* faculties, as he says they at present exist in the several parts of this empire, with what admirable dexterity did he come back again to propose his *one* Faculty—his unique Academy—his INSTAR OMNIUM! Yet Dr. Johnson tells us he is not a leveller, and that he proposes no plan—only a "hint of an indication!"

* We shall give the exact words of the resolution:—"That in the opinion of this Society, the evils now complained of will be remedied most effectually by the constitution of one Faculty or Academy of Medicine, which, under the direction of the legislature, shall preside over and regulate the education and practice of the medical profession throughout the united kingdom."

Let us examine his hint of an indication a little more closely. One Faculty or Academy of Medicine is to be constituted, and from this is to issue forth the supply of practitioners for the whole of the United Kingdom: this faculty, or academy, is further to exercise its authority in the governance of the whole profession. The plan, there can be no question, is a sweeping one; its practicability, however, remains to be proved; for it has *no precedent* existing in the civilized world, and we believe never had.

In France—and our ultra reformers are ever appealing to French arrangements as the *beau ideal* of every thing that is excellent about medical affairs, while it is plain, from the appellations chosen, of Faculty and Academy, that they thought they were following up French arrangements—in France, we say, there is no such thing as an Academy of Medicine either governing the profession or licensing practitioners. The *Académie de Médecine* of Paris—the most respectable *medical society* in France, or perhaps in any country—has no power whatever in the way of granting degrees in medicine or surgery, or any thing else; a power which resides only in the *Ecole de Médecine*, or, more strictly, in the University, of which the *Faculty* are but a band of *employés*.

It is too ridiculous to expose the absurdities in which the admirers of foreign arrangements sometimes involve themselves, from being but indifferently acquainted with the things they profess to admire; and when especially they undertake to give *hints of indications* for new modelling ancient systems, without seeing their way clearly before them.—But the most amusing part of the affair is, that at the very moment our radicals—we *will* call them *levellers*, till they are more rational—at the very time our levellers are for sweeping away all our medical institutions, and setting up *one* Faculty instead of *twelve*, the French re-organizers, envying us our supposed happy condition of abundance of Faculties, (they give us credit for *seven*, viz. our Universities), have determined to double their own number, and, in place of their *three* Faculties, to have *six!*

Another feature of our *one* Faculty, or Academy, we had nearly overlooked. Though only hinted at as a possible indication of a reformed system, arrangements seem to have been already made that the *Instar Omnium* shall have its *annual* presidents—of whom Dr. James Johnson is to be one of the first (we are indebted to Dr. Sigmond, the seconder of the resolution, for this piece of intelligence)—and we presume, as annual presidents and parliaments are to be the order of the day, that universal suffrage on every question will not be forgotten, as another appropriate adjunct.

We pause for the present. This wild, this ridiculous project, has not yet passed the Westminster Medical Society: it has not yet been sanctioned by a majority of votes. Let us entreat the members to bethink themselves before they countenance so Utopian a scheme—only calculated to bring ridicule upon them in the eyes of the public. Let them not go to Parliament with one set of resolutions, demanding only inquiry, while, by another, they shew that they have prejudged the question. If the remedy to be applied be so obvious, why do they pray for investigation, when their prayer ought only to be for carrying into effect a specific proposal? Let them, if they please, and by all means, lend their influence to the furthering of measures of reform; and *reform*, in the liberal but not radical and destructive sense of the word, they will find amply sufficient to procure them all their reasonable demands. Let them aid in the business of amending existing charters, or procuring new ones, if necessary. Let them call upon the Parlia-

ment to cause deep and searching inquiry to be made into the medical corporations, in like manner as is now being done into the municipal ones, throughout the kingdom. Let them do all this, and we wish them success in their upright and rational endeavours: but, in the name of common sense, let us hear no more about their resolutions for "one Faculty or Academy of Medicine." Of this they may rest assured,—that a vast number of members who would sign the petition, if it embraced only the other resolutions, will decline to do so if this piece of absurdity be added.

CLINICAL LECTURE

ON

DISEASES OF THE TESTICLE,

Delivered at St. George's Hospital.

By B. C. Brodie, Esq. F.R.S.

FUNGUS HÆMATODES.

The testicle is liable to certain morbid growths, a class of diseases not under the influence of any remedies with which we are acquainted, and in which the only chance that the patient has of a cure is the removal of the diseased organ. We find now that these organic diseases of the testicle are comparatively of rare occurrence—that is, they are much more rare than they were supposed to be twenty-five years ago, when other diseases, especially that of chronic inflammation of the testicle, which I described in the last lecture, were confounded with them.

The organic disease which occurs most frequently in this organ, is that which used to be called the *pulpy* testicle—the medullary sarcoma of Mr. Abernethy—the fungus hæmatodes of Mr. Hey.

This disease has been long known, but it is only of late years that it has been properly described by systematic writers. The first good description of it is contained in Mr. Wardrop's work on Fungus Hæmatodes; and I do not know that we have even now any better description than what you will find in that publication. I need not describe to you particularly the appearances which this morbid growth exhibits; it will be sufficient if I refer you to what is said on the subject in the systematic courses of surgical lectures delivered in this theatre, as well as in other places. I may, however, mention generally, that the mass of the tumor appears to be nearly of the consistence of the medullary matter of the brain; that there are a number of filaments, probably vessels, which seem to form a net work, in which the medullary matter is deposited; and that often in some parts you find ligamentous bands mixed up with the medullary matter. Specimens of these appearances are seen on the table.

Independently of other classifications, morbid growths may be regarded as of two kinds. First, there are some cases in which a particular organ loses its natural structure, and becomes converted into a diseased structure; and there are other cases in which the morbid growth is altogether a new formation—a tumor growing in a particular part of the body, that particular part remaining entire, and having its natural organization.

Now it would appear that in some cases the glandular structure of the testicle is actually converted into this diseased structure; but there are other cases in which it takes place as a new formation, the glandular structure of the testicle being unaltered. Here [presenting it] is a specimen where none of the glandular structure of the testicle seems to be left; and here [exhibiting it] is another specimen, where in the recent state it was quite evident that the glandular structure of the testicle was entire; a fungous tumor had been generated in the centre of the testicle, and the glandular structure was seen expanded every where as a thin layer on the outside. A man came into the hospital who had fungus hæmatodes of the testicle, and he described the tumor as having begun thus: he felt something like a kernel on one side of the testicle; it grew bigger and bigger, and attained a large size; at last the testicle became confounded with it. In Mr. Wardrop's work on Fungus Hæmatodes, a case is mentioned where there was an opportunity of examining the disease in its origin. The glandular structure of the testicle was natural, and the tumor grew from the surface of the tubuli testis, immediately beneath the tunica albuginea. Here [presenting it] is a specimen in which the glandular structure of the testicle remained in a natural state, while there was a large fungous tumor completely occupying the cavity of the tunica vaginalis.

There is a variety of this disease which is not very unfrequent, in which mixed up with the fungous or medullary structure, there are a quantity of small cysts containing fluid, somewhat like hydatids. Here [exhibiting it] is a specimen of what I have just mentioned; you will observe, however, that in the spirit the cysts are not so distinct as they were before the preparation was put up. In the bottle I now show

you, you see some of the cysts which were taken away are seen lying loose at the bottom.

However distinct the testicle may have been in the first instance, at last it becomes confounded with the disease; and there is then a tumor of an oval shape, and in this respect different from hydrocele. It is also more ponderous than hydrocele; opaque instead of being transparent; harder at some parts than at others; and not having the smooth regular surface of hydrocele. By these diagnostic marks you may generally distinguish it from hydrocele; and yet there is scarcely a surgeon who has not some time or another been deceived by a tumor of this kind, and led to mistake it for hydrocele. This mistake is to be attributed to the circumstance of the medullary matter of the tumor giving to the fingers the exact feeling communicated to them by the fluid of hydrocele. By a careful examination, however, you will generally have no difficulty in forming a diagnosis between this and hydrocele; but at any rate you may satisfy yourselves very easily. Puncture the tumor with a very small trochar; if it be a hydrocele the serum escapes, and the tumor disappears; but if it be fungus hæmatodes, there comes out a little blood, and that is all. No harm is done by the puncture. If the patient be laid up on a sofa, the bleeding soon stops, and the wound made by the puncture heals.

Sometimes, however, you have hydrocele existing in combination with the fungous disease. Here [exhibiting it] is a specimen where there was such a disease of the testicle; and you see that the cavity of the tunica vaginalis has been distended with water. More frequently it happens that the cavity of the *tunica vaginalis* is obliterated by adhesion, as in these two preparations [presenting them], and sometimes there are partial adhesions, as in this specimen [exhibiting it], and then a kind of partial hydrocele. There is never any large collection of fluid in a hydrocele under these circumstances; and I do not think there is ever any danger of mistaking the disease for hydrocele, merely on account of the little fluid which the *tunica vaginalis* may contain. As the disease goes on the testicle increases in size. At first the patient suffers neither pain nor inconvenience, but afterwards he is incommoded by the bulk of the tumor. As it advances farther he feels a dull pain in the tumor; some pain in the loins. The tumor continues increasing; and it is said by Sir Astley Cooper, that at last it becomes attached to the scrotum, that the scrotum ulcerates, and that an ill-conditioned fungus sprouts up through the ulcerated opening. Sir Astley Cooper describes this, and I presume has seen it; but it has not fallen in my way to observe a tumor in this advanced stage. The opportunities of doing so are probably very rare, because the testicle is almost invariably amputated long before the disease gets to this point; at any rate the tumor may, I know, grow to an enormous size before any ulceration of the skin, or protrusion of the fungus, takes place.

When the disease first exists, the spermatic cord is in a natural state, and in many cases it never seems to be much enlarged; but in other instances the disease extends to the spermatic cord itself. Here [presenting a preparation] you see the spermatic cord affected to a very great extent. Seeing this, you will not wonder that a disease should take place in the loins, where the spermatic cord originates. The disease, however, will shew itself in the loins, although the spermatic cord be healthy. This I have seen many times, in examining bodies after death. The structure of the tumor in the loins is generally the same with that of the tumor in the testicle. In one of the cases which I have mentioned, where the disease existed in the testicle, complicated with little hydatid-like cysts, there was a fungous tumor in the loins, containing cysts of the same kind. The tumor in the loins being once formed, goes on increasing in size, the patient at the same time becoming emaciated, until at length you may feel the tumor through the abdominal muscles and viscera. Sometimes the tumor in the loins, pressing upon the vena cava, diminishes the diameter of that great vessel—or even obliterates it altogether.

In many cases the tumor in the loins gives the patient no pain, and but little inconvenience, while at other times it is attended with the most extraordinary suffering. I suppose this depends on the accidental circumstance of it sometimes pressing upon nerves, and in other cases lying clear of them. A gentleman with whom I was acquainted many years ago, had this disease in the testicle: Mr. Cline was consulted, and he recommended the amputation of the testicle, and performed the operation. A year afterwards, the patient became weak in his lower limbs, and at last they became completely paralytic. He died, and on examining the body after death, there was found a large tumor in the loins, which had affected the vertebræ so as at last to press on the medulla spinalis; thus accounting for the paraplegia.

But it is not merely in the loins that such tumors form, in connexion with the disease in the testicle. I have seen many cases where the patient has had the disease in the lungs, or in other parts of the body. At first, the general health of the patient is unaffected; but when the disease thus attacks

other organs, it necessarily suffers: the patient loses flesh; his tongue becomes furred; he looks sallow; he has that appearance, that upon looking at him you would say he laboured under organic disease. He goes on becoming weaker, and dies.

The disease occurs at any time of life. Mr. Earle has described it in a child, I think under two or three years of age. Other cases also have been recorded where it has occurred in children. However, it must be allowed, that the disease is very rare under the age of puberty, and that it generally occurs between puberty and the middle period of life.

Treatment.—This being one of the worst forms of malignant disease, over which medicine has no dominion, and which is equally uninfluenced by local applications, it is evident that the only chance which the patient has, is that of the amputation of the diseased organ. But experience shews that this chance is a very small one. I have seen the operation performed a number of times, and have frequently performed it myself. Of course I may have lost sight of some of the patients, but among those cases in which I have been able to keep them in view, I have never known but one instance in which there was no recurrence of the disease. That case occurred in a man, whom some gentlemen here may remember, four or five years ago, in this hospital. He was a French courier, in the employment of Sir Stratford Canning, and had the disease in one testicle, which was amputated, and for aught that I know may be one of those on the table. The wound healed, and about a year ago I heard that he was alive and continued well; so that he had gone on favourably for three or four years after the operation. In all the other cases of which I have known the termination, the patients have died, not immediately after the operation, but some time afterwards. In a patient in whom the disease was complicated with hydatid-like cysts, the wound healed, but the man appeared ill afterwards; there was some load upon him, but we could not tell what. At last there were symptoms like those of peritoneal inflammation: blood was taken from him, but his constitution broke down directly, and he died. On examining the body after death, we found a tumor in the loins, exactly corresponding to the tumor in the testicle. An abscess had formed in it, and seemed to have excited peritoneal inflammation. Another patient died in this hospital not long afterwards, and if I remember right, nearly in the same manner.

I have already told you of one gentleman who died paraplegic a year or two after Mr. Cline had amputated the testicle; other patients die some time after the operation. The patient is seized with symptoms of effusion of water into the chest; he dies; you examine the body after death, and you find one cavity of the pleura filled with serum, and fungous tumors in the lungs, just resembling what had existed in the testicle. This preparation [presenting it] was taken from a patient whose case terminated in this manner. It was ascertained after death that the disease had begun to exist in the lumbar glands also. In another case in which the patient died after the operation, his death was attended with some unusual circumstances, which I shall mention. He came to London, and consulted two eminent surgeons—it is now many years ago—about a disease of his testicle. One thought it was a hydrocele, and the other a pulpy testicle, as it was then called. There was a consultation, and the second surgeon proved to be right. The testicle was amputated; the spermatic cord was quite sound, and the wound healed. About a year afterwards, the patient came back with an enormous tumor in the glands, below Poupart's ligament; it was as large as a child's head, and no doubt of the same kind as the disease in the testicle. The skin was ulcerated; the tumor bled profusely, and bled and bled again, until at last the patient actually died of the hæmorrhage. I mention the case because it was peculiar, and also because it leads me to notice this circumstance—that the glands of the groin are very rarely affected with this disease, whereas the glands in the loins are affected frequently. I should suppose that the glands of the groin would become affected when the disease has been communicated to the scrotum, as the absorbent vessels of the scrotum go to the groin, whereas those of the testicle go to the loins; and this seems to be what Sir Astley Cooper observed in those cases in which the disease was sufficiently advanced to produce a fungus. But in the case that I have just mentioned, the scrotum was not at all affected; neither at the time of the operation, nor afterwards, was there any perceptible disease of it.

It is a poor chance, you will say, that you offer your patient; but it is his only one, and therefore he ought to have it. Amputate the testicle, if it gives him any chance at all. But it may be that there are already marks of the disease elsewhere; that you can feel a tumor in the loins; or there are symptoms of disease in the chest; or there is emaciation and a sallow look, which satisfies you that the disease exists in other parts besides the testicles; or it may be that the spermatic cord is extensively contaminated. Under these circumstances, of course you will not perform

an operation; not put the patient to unnecessary pain; not raise his hopes merely that they may be disappointed afterwards. You will of course not operate in these cases any more than you would in other hopeless cases; first, because it is not right towards the patient; secondly, because it is not right towards society: for operating in these hopeless cases brings surgery into discredit, the unfavourable result making other persons unwilling to submit to operations, who might perhaps be cured by them. But if there be no marks of disease any where else, and if the spermatic cord be sound, then amputate the testicle; and, as in the case of the courier, whom I mentioned just now, it may be that the operation may be successful, although the chance is but a small one.

It is important that you should operate in the early state of the disease, for it seems not improbable that after all, it is local in its origin. At least it may be that the testicle is affected first, that then the disease is taken up into the circulation, and so affects other and distant organs. This hypothesis derives some support from the following circumstance. In cases of this disease, both in the testicle and other parts of the body, it every now and then has happened that the absorbent vessels leading from the diseased structure have been found filled with the same kind of substance of which that structure mainly consists, as if they were actually employed in carrying it off to deposit it in the general circulation. I recommend you, then, to amputate the testicle at an early period; it cannot be done too soon.

It must, however, be acknowledged that there are some cases where, in the early stage of the disease, you will find it difficult to make an exact diagnosis. The disease which is most likely to be confounded with fungus hæmatodes is that which I described in the last lecture under the name of chronic or tubercular inflammation of the testicle. If you are in any doubt on the subject, your means of settling that doubt are very simple:—give the patient calomel and opium, make his gums a little sore, and if the testicle be affected with chronic or tubercular inflammation, as soon as the gums are sore you will find the testicle become softer and smaller, and then you know that you need only go on with the mercury to effect a cure. But if the gums are sore, and the testicle does not become softer and smaller, but, on the contrary, continues increasing in bulk, you may then conclude that it is not chronic or tubular inflammation; that it is some change of structure which cannot be cured by art, and in all probability that it is this particular kind of disease, and you will recommend an operation.

CLINICAL OBSERVATIONS

ON THE

MEANS OF CONDUCTING THE HEALING OF BURNS,

WITH A VIEW TO THEIR FAVOURABLE CICATRIZATION.

By Baron Dupuytren.

From the "Leçons Orales," published periodically under the Baron's inspection.

It is proved by observation that nature has two modes of effecting the consolidation of solutions of continuity. Whatever be the extent of the wound, and the nature of the textures in which it has been made, provided the process of reparation does not exceed the powers of the individual, there takes place over the whole of the surface an inflammatory action, which constantly tends to approximate the borders, and bring them into contact, ultimately agglutinating them by a layer of lymph, by the organization of which the continuity is restored. This interposed structure itself at length disappears, and then there remains no other trace of the lesion than a mere line, which ultimately becomes imperceptible; this is *immediate* union, or union *by the first intention*.

But where there is a considerable loss of substance, or where, for various reasons, the first mode of union is designedly prevented, other phenomena present themselves: a new tissue is formed, to supply the place of what has been destroyed. This is fibro-cellular in its nature, and I have called it the *tissue of cicatrix*. If the work of reproduction go on regularly, and the loss of substance be nearly or altogether repaired, we then have a production to which I give the name of *tissu etaté* of the cicatrix, because it represents with greater or less fidelity the textures which have been destroyed. But where this is not the case, it causes deformities, bridles or bands between parts—in a word, bad cicatrices, with the partial or total loss of the mobility of the part.

The results of cicatrization may present themselves in every case where a burn has caused loss of substance, but in different forms and different degrees; these we proceed to examine.

Burn of the first degree.—Heat acts in two ways in producing the first degree of burn: either its action, more or less intense, is instantaneous, and gives rise to a true erysipelas, marked by sanguineous congestion, redness, and sharp pain, constituting the *acute* stage of a burn; but this causes neither solution of continuity, nor loss of

substance, and consequently requires no cicatrization to cure it. In other cases the heat, exercising a gentle but prolonged influence, as in women who make habitual use of chafing-dishes, in old people and convalescents who sit much by the fire, in the followers of certain trades—in such persons I say, the heat produces different lesions of the skin, which ought rather to be regarded as deformities, and of which we shall speak hereafter. These results constitute what I call the *chronic* form of burns of the first degree.

Burn of the second degree.—This consists in vesication more or less extensive. The epidermis is detached from the mucous tissue, and must perish. There is here loss of substance, and there will consequently be a process of reproduction. But this is carried on in three different modes—that is to say, 1st, without suppuration; 2d, with slight suppuration; or, 3d, with suppuration which is long and copious. It is very important to discriminate between these. In many cases, while the epidermis which forms the vesication, though detached, has not been removed, but rests on the mucous surface after the evacuation of the fluid, there being no suppuration, a new epidermis is formed, the period varying from 24 hours to five or six days, or even more. There remains, then, no trace of the burn, but redness, more or less marked, which usually disappears from the twentieth to the thirtieth day. This condition is in all respects like that of a flying blister; and there being no suppuration, the colour of the skin is preserved. In fact, in a negro, who suffers a burn of this kind, the surface still remains black. But it is different in those burns of which I am next to speak.

When the action of the heat has been more intense, or being in other respects the same if the epidermis has been removed by accident or ignorance, and thus left the true skin naked, inflammation, more or less acute, takes place, and we observe two orders of phenomena. First, after the effusion of serum during some days, a suppuration small in quantity and of short duration, and then the result is little different from that pointed out as accompanying the preceding degree; the wound becomes dry, a fine pellicle, the element of the new epidermis, extends itself over it, and all traces of the lesion are effaced; or, secondly, under other circumstances, an abundant suppuration takes place, which in many continues, notwithstanding the utmost care, during several months. I shall describe the phenomena in this latter case. The effect of this long and abundant suppuration differs in nothing from what takes place when a blister has been very long applied: either the mucous texture is completely destroyed or deeply impaired in its organization; while at other times it is destroyed at some parts, and its organization impaired in the interstices. In the first case, the disorder has penetrated to the chorion, the burn has passed into the third degree, and the progress of cicatrization is the same as in this last, of which I shall speak immediately. In the second case, the colouring matter generally becomes of much deeper colour than natural; hence those yellow or brown stains which remain after the cicatrization—stains which are never removed, nor even modified, except to a very trifling extent. In the negro, also, the skin becomes much deeper coloured than natural. Lastly: in this third case, the surface of the chorion granulates unequally at every point where the mucous structure has been completely destroyed. The cicatrix then presents rather a fantastical appearance, being prominent and white at some points, while at others it is depressed, and more or less brown.

A knowledge of these facts forms not only the basis of the indications to be fulfilled and of the prognosis to be given, but also furnishes useful hints for general practice. Thus, to give an example, when we are obliged to apply a permanent blister on a part of the body which is exposed—as on the neck or arm in the female—it teaches us not to continue the suppuration long enough to leave a mark; and if the disease require its longer presence, care must be taken to shift it from one place to another. I have thus kept blisters open on young persons, in diseases imperatively requiring their use for a long period, yet without causing any scar.

After what I have said (continued M. Dupuytren), you will comprehend what ought to be the treatment of this species of burn. It is evident that it ought to consist in emollients and antiphlogistics—even venesection, if it be rendered necessary by more than usual inflammation; great care being taken to avoid the application of irritants, or the removal of the detached epidermis, while we strive to repress suppuration. But if we are only called in at a period when suppuration has already existed for some time, other means become necessary. The granulations are to be repressed by nitrate of silver, and afterwards covered with linen, with numerous holes in it, and spread with cerate: plates of sheet lead, by the equal pressure which they effect, may also be of great use. By these means we obtain an equal flat cicatrix, free from deformity.

Burn of the third degree.—This degree of burn is characterized by the total destruction of the epidermis, of the mucous surface, and a greater or less portion of the chorion, or dermis; but this last is not destroyed

through its whole extent. Mark well (said M. Dupuytren) this limit of the disorganization: it is by it that we are enabled to explain the manner in which the cicatrix is formed, and the difference between this and what takes place in the cicatrices of the following degrees. In this case, in fact, the whole thickness of the true skin is not destroyed, nor, consequently, is a reproduction of the entire of the cutaneous tissue required, as in the fourth degree; there remains of this a layer of greater or less thickness, from which the new surface is produced. When the eschar which comprises the rete mucosum and a portion of the thickness of the true skin has separated, the surface of the wound presents a multitude of small red points on a white ground. This is the portion of the chorion which has not been destroyed. Soon these points increase more and more, and at length altogether occupy the surface, which thus becomes uniformly red. The cicatrix, then, is made up of the granulations, which are of cellular texture, vascular, and with nerves; and by their progressive development they fill the cavity which the eschar had left. But however instantaneous may have been the action of the heat, it never implicates all the textures to a perfectly equal depth. It happens, then, in this the third degree, that at certain points the rete mucosum alone has been destroyed, and the chorion slightly affected; while in others this last is deeply implicated, but still is not perforated. These inequalities are perceptible throughout the whole progress of the healing.

It may be imagined that all the methods of cure recommended for the second degree, apply equally here. It farther, however, becomes necessary to take care that no preternatural adhesions are formed, and that none of the natural apertures become closed; and I have found particular advantage from a contrivance I have used for the last fifteen years, which consists of a piece of ivory, of convenient form, introduced into the nose; it preserves the nostrils and much diminishes the deformity.

In order to correct the excessive growth of the granulations, the nitrate of silver is to be used here as before, and particular attention given to the mode of applying the dressings: these ought to be so arranged that the matter may be absorbed, and remain the shortest possible time in contact with the wound. To accomplish this, I am in the habit of covering the surface with compresses, pierced by numerous little holes very close to each other, and spread with cerate; above this I apply a layer of dry charpie, and retain the whole *in situ*, not with a roller, but by means of bandages separate from each other. The pus thus passes through the apertures in the first compresses, is absorbed by the charpie, and may even escape between the interstices of the outer bandages. After a time the granulations become firmer, particularly at the base, and assume a fibrous structure. An epidermis next forms at the summit, at first very thin, and beneath which is generated a rete mucosum of bright red colour, irritable, liable to suffer congestion, and the frequent seat of erysipelas. This rete mucosum is imperfectly formed, and for the most part wants the pigmentum, or colouring matter; so that the cicatrix in the negro becomes white. In some cases, however, the pigmentum is formed in superabundant quantity, giving to the skin a discoloration more or less deep.

Burn of the fourth degree.—This is characterized by complete destruction of the skin, through its whole thickness; the subjacent cellular tissue being laid bare, but remaining itself uninjured, or but very slightly affected. The cicatrization in this degree takes place in various ways. 1. After the separation of the eschar, the edges of the wound gradually approximate, and so unite. 2. The edges remaining apart, a new cutaneous texture is formed, at the expense of the cellular membrane beneath, which replaces the portion which had been lost. 3. Both the above processes simultaneously take place.

After the fall of the eschar, the bottom of the wound is formed by the cellular tissue; the edges exhibit a red circle (the rete mucosum), which gradually diminishes, the skin of the surrounding parts yielding proportionally. After being dragged to a certain extent, however, they can be stretched no farther, and then new texture is formed, to fill up the void which still remains. Of course, the looser the skin and cellular membrane adjoining the burn are, the smaller is the cicatrix which is ultimately formed; while, in parts which do not admit of the adjacent skin yielding, the gap left and the new tissue required, must be proportionally larger. The cellular membrane which is situated at the bottom of the wound, and which is in a state of granulation, undergoes a peculiar change—it becomes fibro-cellular, and constitutes the chorion. When once this is formed, the rest of the cicatrization goes on rapidly; a rete mucosum, though imperfect, is formed, and this again is covered with an epidermis differing but little from the natural one. The production of this accidental chorion, however, costs much to nature—she is very long in effecting its organization, particularly in large wounds; but after this, all is rapid, and it is astonishing to see a wound which has lasted one, two, or more months, almost without any apparent change, all at once heal up in a few

days. Much care, however, is required in directing the process, so great is the liability to deformity from the adhesions and contractions which otherwise occur.

The first thing to be attended to, is the position of the limb, or other part; and, as a general rule, this must be laid in such a posture as diametrically to oppose the approximation of the edges of the wound, in order to obtain a cicatrix corresponding in size to the extent of skin destroyed, or even of greater extent; and thus to allow for the contractile power of the new tissue. It is unnecessary to give examples—the rule is too perspicuous to require them, and it must be put in force by different means in each different region of the body. There are circumstances, however, under which it is difficult, or impossible, to observe the requisite position: such, for instance, is the case where the skin is destroyed through the whole circumference, and over a certain extent of a limb. Here, in adopting any one position, we lose the advantage of others: the only thing to be done in such circumstances, is to place the limb in such manner that the cicatrix be the least possible restraint when formed. Thus, if the burn occupy the whole circumference of the wrist, the limb ought to be kept extended rather than bent; because the former position will prove less inconvenient when the cicatrix is completed than the latter would. Occasionally the position may be varied, and the limb kept for a time in one position and then in another. Cases are often met with, in which the means necessary to produce a good cicatrix cannot be adopted, or at least persevered in, without great inconvenience, or even without danger to the life of the patient. This happens, for instance, where there is risk of his being worn out by long-continued suppuration. So far from preventing the cicatrization, we are then glad to accelerate it by facilitating an approximation of the edges; but it is right that the practitioner should take the precaution of explaining to the patient, or his friends, the reasons which induce him to adopt this course, as well as the evil which must necessarily result from it.

There are also some regions of the body where we cannot make use of position, and where it is always extremely difficult, and sometimes impossible, to prevent deformity—such particularly is the face. If a burn of the fourth degree, for instance, destroy a portion of the lower eyelid and cheek, it would be impossible to prevent the edges of the wound from approaching, and the eyelid may be seen cicatrized in such manner as to bring it almost into contact with the upper lip. Such was the case in a girl lately brought to me, and I had great difficulty in persuading the parents that the surgeon had not been to blame.

It is necessary, then, to retard as much as possible the separation of the eschar, for this, as long as it remains, keeps the borders of the wound apart. The process of cicatrization commences beneath it, while the inflammation of the edges of the wound extends into the adjacent tissues, by which they are less easily approximated when the eschar falls. This resource, then, merits attention, but without being of very great importance. When the eschar has dropt off, the cicatrization must be hastened by frequent cauterization, by means of nitrate of silver. This speedily determines the formation of the new cellular tissue, and I have obtained great advantages from it in many cases. Far from increasing the deformity, as many have said, it tends to produce an equal smooth cicatrix; but care must be taken that the healing is not retarded by the contact of purulent matter, and this must therefore be carefully removed from the surface, and the wound frequently dressed.

The position which has been adopted as proper during the cicatrization must be persevered in for a considerable time—a month, six weeks, or longer—after the entire healing of the wound. The force of retraction possessed by the cicatrix (a force, by the way, which has been much exaggerated), may produce such contraction of the wound as would lose the advantage previously gained; and the parts must therefore be very gradually suffered to return to their former freedom. In burns of the fourth degree, the adequate position of the parts must be maintained by bandages, varied according to circumstances, but so contrived as to counteract the contraction of the muscles. In burns of the second and third degrees, the adhesion of the neighbouring parts is prevented by merely keeping them separated by the interposition of dressings, and by moving them from time to time; but in those of the fourth degree such simple means will not suffice.

It will be perceived, continued M. Dupuytren, that if a burn of the fourth degree affect the circumference of any of the natural orifices, such as of the nostrils, or vagina, or mouth, &c., it is not compression, such as that employed in other cases, which will suffice, but compression exercised from within outwards, and by the separation of the parietes of the openings by means of charpie, tents, sounds, sponges, ivory tubes, &c. These contrivances are the same as in burns of the third degree, but with these differences—that their necessity is much more urgent, that the diameter of the foreign body must always exceed that of the aperture into which it is introduced, and that their use must be continued long after the apparent cure, in order to overcome the force of contraction of the new textures.

Burns of the fifth and sixth degree.—When the burn is so deep as to implicate the muscles and tendons, most of the means I have pointed out become superfluous. The treatment in this case consists almost entirely in giving to the limb or part such position as shall be least inconvenient when the parts are cicatrized. Most frequently the disorganization is carried to such extent that we have only to occupy ourselves in endeavouring to save the life of the sufferer by promoting the healing process in every way, without reference to what deformity may arise, or the loss of function which may ensue.

[To be continued.]

ROYAL SOCIETY.

[The following notices of papers lately read before the Royal Society, are taken from the official summary drawn up for the use of the members.]

The Anatomy and Physiology of the Liver. By Francis Kiernan, Esq. M.R.C.S.

After giving a short account of the descriptions of Malpighi and other writers respecting the minute structure of the liver, the author proceeds to state the results of his own investigations on this subject. The hepatic veins, together with the lobules which surround them, resemble in their arrangement the branches and leaves of a tree; the substance of the lobules being disposed around the minute branches of the veins like the parenchyma of a leaf around its fibres. The hepatic veins may be divided into two classes; namely, those contained in the lobules, and those contained in canals formed by the lobules. The first class is composed of interlobular branches, one of which occupies the centre of each lobule, and receives the blood from a plexus formed in the lobule by the portal vein; and the second class of hepatic veins is composed of all those vessels contained in canals formed by the lobules, and including numerous small branches, as well as the large trunks terminating in the inferior cava. The external surface of every lobule is covered by an expansion of Glisson's capsule, by which it is connected to, as well as separated from, the contiguous lobules, and in which branches of the hepatic duct, portal veins, and hepatic artery, ramify. The ultimate branches of the hepatic artery terminate in the branches of the portal vein, where the blood they respectively contain is mixed together, and from which mixed blood the bile is secreted by the lobules, and conveyed away by the hepatic ducts which accompany the portal veins in their principal ramifications. The remaining blood is returned to the heart by the hepatic veins, the beginnings of which occupy the centre of each lobule, and when collected into trunks pour their contents into the inferior cava. Hence the blood which has circulated through the liver, and has thereby lost its arterial character, is, in common with that which is returning from the other abdominal viscera, poured into the vena portæ, and contributes its share in furnishing materials for the biliary secretion. The paper is accompanied by numerous drawings of preparations made by the author, of the minute structure of the liver, in which the different sets of vessels and ducts were injected in various ways.

On the Reflex Function of the Medulla Oblongata and Spinalis. By Marshall Hall, M.D F.R.S. L. & E.

The author, after commenting on the opinions of Le Gallois and Cruveilhier relating to the functions of the spinal marrow, adverts to a property or function of the medulla oblongata and spinalis, which he considers as having escaped the notice of these and all other physiologists; namely, that by which an impression made upon the extremities of certain nerves is conveyed to these two portions of the nervous system, and reflected along other nerves to parts different from those which received the impression. He distinguishes muscular actions into three kinds: first, those directly consequent on volution; secondly, those which are involuntary, and dependent on simple irritability; and thirdly, those resulting from the reflex action above described, and which include those of the sphincter muscles, the tonic condition of the muscles in general, the acts of deglutition, of respiration, and many motions, which, under other circumstances, are under the guidance of the will. Volition ceases when the head or brain is removed; yet, as he shows by various experiments, movements may be then excited in the muscles of the limbs and trunk, by irritations applied to the extremities of the nerves which remain in communication with the spinal marrow: but these actions cease as soon as the spinal marrow is destroyed. Hence the author concludes that they are the effect of the reflex action of the spinal marrow, which exists independently of the brain; and, indeed, exists in each part of the organ independently of every other part. He considers that this reflex function is capable of exaltation by certain agents, such as opium and strychnine, which in frogs produce a tetanic and highly excitable state of muscular irritability. Hence he is led to view the reflex function as the principle of tone in the muscular system. He considers that certain poisons, such as the hydrocyanic acid, act by destroying this particular function. The effects of dentition, of alvine irrita-

tion, and of hydrophobia, of sneezing, coughing, vomiting, tenesmus, &c. &c., are adduced as exemplifications of the operation of the same principle when in a morbid state of exaltation.

Respiratory Organs of the Leech. By Geo. Newport, Esq.

The stomach of the leech has been hitherto described as a large elongated sac, simply divided into ten compartments by perforated membranous partitions; but the author, by a more accurate examination, finds that each portion of that organ is expanded into two lateral cæca, which increase both in size and in length as they are traced along the canal towards the pylorus. The cæca belonging to the tenth cavity are the longest, extending as far as the anus, and have themselves four constrictions; the cavity itself terminates in a funnel-shaped pylorus. When the posterior end of the animal is cut off, the cæcal portions of the stomach are laid open, and the blood which it receives flows out freely, as fast as it is swallowed; and hence the leech, under these circumstances, continues to suck for an indefinite time.

The respiratory organs consist of two series of pulmonary sacs, arranged along the under side of the body, on each side of the nervous cords and ganglia. They each open upon the surface of the body by a very minute but distinctly valvular orifice. The membrane which lines them appears to be continuous with the cuticle, and is exceedingly delicate and highly vascular, receiving the blood, for the purpose of its being aerated, from the veins of the system. The blood is returned from these sacs into the lateral serpentine vessels by vessels of a peculiar construction, passing transversely, and forming loops, which are situated between the cæca of the stomach, and which are studded by an immense number of small rounded bodies closely congregated together, and bearing a great resemblance to the structure of the venæ cavæ of the cephalopodus mollusca. The purpose answered by this structure is involved in much obscurity; the author offers a conjecture that they may be analogous in their office to the mesenteric glands of the higher animals.

With a view to determine some circumstances relating to the mode of the respiration of the leech, the author made some experiments, by confining the animal in water deprived of air by boiling. After some time the leech was observed to give out bubbles of air; and the water of the vessel, when tested by lime-water, indicated the presence of carbonic acid.

The paper is accompanied by drawings of the structures described.

MIDDLESEX HOSPITAL.

CASES OF FRACTURE OF THE JAW.

To the Editor of the Medical Gazette.

Sir,

Having read in your Gazette of July 27th a letter from Mr. Lonsdale respecting an instrument invented by him for treating fractures of the jaw, and having used it with success in every case which has fallen under my care since I have been house-surgeon to this hospital, I take the liberty of sending you the results.

I hope that this ingenious instrument will be universally adopted, when its value has been duly appreciated by more general application. There is so great difficulty, by the usual remedies, in keeping the fractured portions in apposition, especially when it is situated at the symphysis, that it rarely happens we succeed in remedying the evil without some disfigurement resulting therefrom.

It is not my intention to assert that this apparatus is applicable in those cases where there is much contusion and inflammation of the soft parts; the object should then be, as in case III., to reduce the inflammation, taking care at the same time no union ensues until the parts have sufficiently regained their healthy condition to allow the application of the instrument.—I am, sir,

Your obedient servant,
Isaac Flower,
House-surgeon.

Middlesex Hospital,
7th Dec. 1833.

Case I.—William Hill, æt. 6. The jaw was fractured at the symphysis, occasioned by a truss of hay falling on the face: there was great displacement, the position on the right side being elevated and more prominent than the other; ordinary means were employed, but the bones could not be kept in their proper situation. At the suggestion of Mr. Lonsdale I employed his apparatus, and the patient was discharged, three weeks after the accident, perfectly cured, and without the least displacement.

Case II.—Ellen Lane, æt. 34. The fracture was near the ankle, occasioned by a blow. She had been to a practitioner, who employed the usual means in this case. The bones could not be kept in apposition. On admission the instrument was applied, and the patient perfectly cured 24 days after the accident.

Case III.—John White, æt. 12. A compound fracture at the symphysis: there was great inflammation, and he was labouring under concussion. He was bled, and cold applications applied till the inflammation was subdued. The displace-

ment was similar to case I. The apparatus was applied on the 14th day, and he was discharged, perfectly cured, on the thirty-fifth day.

Case IV.—Elizabeth Brunswick, æt. 39. Similar in every respect to Case II. Was discharged, cured, on the 28th day.

Case V.—Richard Crusc, æt. 49. The jaw was fractured in two places—viz. between the angle and symphysis, and at the angle. In this case the instrument was applied immediately, and a compress applied over the angle, and tightly bandaged. He was discharged, cured, 20 days after the accident.

Case VI.—George Blake, æt. 28, was brought to the hospital in an insensible state, having fallen in a fit. The fracture was on the right side, between the middle and lateral incisor teeth: the right portion was elevated and prominent. The apparatus was used, and he was discharged, perfectly cured, 30 days after the accident.

"BALLOTTEMENT" PERCEIVED IN THE HYPOGASTRIUM.

(From a Correspondent.)

We understand that Mr. Heming has obtained some interesting results in an investigation of this surest sign of pregnancy, as obtained by placing the person on her side, inclining to the prone position, and applying the fingers so as to receive the fundus, or body of the uterus, and by the appropriate movement to obtain the phenomenon of ballottement, or, as that gentleman proposes to term it, of *repercussion*. This mode is certainly attended with great advantages over the other. It may be adopted without inflicting the distress of an examination per vaginam, and in cases in which such an examination would be absolutely refused, or even unsatisfactory if performed.

LIST OF NEW MEDICAL WORKS.

A Critical Inquiry into the various Opinions advanced on the Physiology of the Blood-Vessels, Absorbents, and Process of Absorption, in the Adult and Fœtus: likewise on the Blood, Lymph, and Chyle; the Changes which these undergo in separate Parts of the Body, and the different Appearances which each exhibit in Health and Disease. By R. Vines, Veterinary Surgeon. Part I. 8vo. 3s. sd.

New Medical Works in Preparation.

A Demonstration of the Nerves of the Human Body, by Joseph Swan, Part IV. containing the Spinal Nerves, is nearly ready, and will complete the Work.

A Second Edition, considerably altered and enlarged (with ten plates), of a Treatise on Diseases of the Nerves. By J. Swan. 1 vol. 8vo.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Dec.* 10, 1833.

Abscess	13	Hydrophobia	1
Age and Debility	199	Indigestion	1
Apoplexy	42	Inflammation	243
Asthma	91	Bowels & Stomach	21
Cancer	10	Brain	8
Childbirth	23	Lungs and Pleura	43
Cholera	30	Influenza	2
Consumption	364	Insanity	26
Convulsions	139	Jaundice	13
Croup	18	Liver, diseased	19
Dentition or Teething	68	Measles	59
Diabetes	1	Miscarriage	1
Diarrhœa	2	Mortification	24
Dropsy	72	Paralysis	35
Dropsy on the Brain	83	Rheumatism	7
Dropsy on the Chest	8	Scrofula	1
Epilepsy	4	Small-Pox	40
Erysipelas	12	Sore Throat and Quinsey	2
Fever	71	Spasms	9
Fever, Intermittent, or Ague	7	Stone and Gravel	1
Fever, Scarlet	52	Stricture	2
Fever, Typhus	12	Thrush	9
Fistula	1	Tumor	4
Gout	2	Venereal	1
Hæmorrhage	3	Worms	1
Heart, diseased	16	Unknown Causes	63
Hernia	2		
Hooping-Cough	109	Stillborn	75

Increase of Burials, as compared with the preceding week . . . 1596

The great number of burials in this week's Bill of Mortality, arises from some of the clerks of the large parishes having shamefully withheld their returns (which ought to be made weekly) till the close of the year's account.

METEOROLOGICAL JOURNAL.

Dec. 1833.	Thermometer.		Barometer.	
Thursday . 5	from 44	to 51	29·48	to 29·40
Friday . . 6	35	49	29·46	29·34
Saturday . 7	38	53	29·28	29·24
Sunday . . 8	41	49	29·75	29·78
Monday . . 9	43	57	29·54	29·51
Tuesday . . 10	39	54	29·55	29·79
Wednesday 11	36	43	29·51	29·50

Prevailing wind, S.W.

Except the 6th, and two last days, cloudy, with frequent rain. Several flashes of lightning during the evening of the 5th.

Rain fallen, ·7 of an inch.

Notices.—Dr. Brown's letters have been received: the nonsense about ricc does not require refutation, and the subject of his communication is otherwise not calculated to excite interest at present. We cannot undertake to enter into private correspondence, except on very particular occasions.

There is no doubt some justice in the observation of Sanctos, but no good would result from its publication.

We are much obliged to Mr. Estlin for the Report.

Castigator, though abundantly severe upon the Lancet, does not appear to us to have taken up any new points.

Erratum.—In our last No. page 376, *dele* the first two lines of second column.

W. Wilson, Printer, 57, Skinner-Street, London

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 21, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XI.

PATHOLOGY of MENSTRUATION.

CESSATION OF THE MENSTRUAL SECRETION.

Period at which it occurs.—In temperate regions, between the ages of 40 and 50 the second climacteric period of female life arrives, and is marked by the cessation of the accustomed periodical evacuation; after which epoch women are incapable of bearing children. Within this range, however, great as it is, is not always included each extreme limit; for cases have been known in Europe, where the disappearance of the menses occurred as early as 35, and others in which they have been delayed to nearly 55; such, however, are very rare; and if we were to select one particular year as that in which the final interruption is remarked in the greatest number of individuals, we might mention the 48th. The time of cessation seems in some degree to be regulated by the age at which puberty was developed; for, as I have before observed, in the tropics, and in those instances in our own country, where the discharge shews itself sooner than is customary, its cessation is commonly proportionably early.

Mode of cessation.—Occasionally the catamenia cease suddenly: for month after month they have flowed regularly; when they fail in appearing at the time expected, and never again return. More frequently, however,—and perhaps also more naturally,—the cessation is somewhat gradual; the patient misses one period, and perhaps menstruates before the next. Another will pass over, and again at an uncertain time the discharge recurs; in this way appearing irregularly—each interval, probably, being longer, until its entire departure. It also becomes irregular in quantity, and in the duration of its flow;—at one time there is less than usual;—at others considerably more. Thus, then, it gradually ceases; and the system being prepared for its final suppression, generally suffers but little inconvenience. When this change in the constitution is perfected, the secretion is never again formed; and those sanguineous eruptions which have been looked upon by women as a restoration of the catamenial discharge, when life was far upon the wane, and have been hailed as a proof of re-acquired juvenility, are in truth evidences of organic disease, which in all probability will ultimately destroy.

Symptoms frequently mistaken for those of pregnancy.—The symptoms which usually attend the cessation of the menstrual discharge are frequently mistaken by females for those of pregnancy; and I believe, with La Motte, that many women entertain such a dislike to the idea of growing old, that they will persuade themselves—however unlikely it may be—that they are pregnant, rather than acknowledge they are sinking into years. Together with other dyspeptic symptoms, which they willingly flatter themselves are the result of pregnancy, flatulence is generated in the bowels, increasing the personal bulk, and giving rise, by its motion, to the conviction that quickening has taken place.

Sequelæ of cessation.—There is at this crisis a stronger tendency towards the formation of organic disease than at any other period of a woman's life;—or perhaps it would be more correct to say, that any existing predisposition to unhealthy actions is more easily excited just now, in consequence of the suppression of a customary

evacuation. Some physicians, indeed, have denied this position, and contended that women are not more liable to the development of serious affections at this than at any other age: my own observation, however, would certainly favour the commonly received opinion. The organs which seem to be most obnoxious to disease at this particular time, are the uterus, and those connected with the generative system; others are also liable to be affected by remote sympathy, such as the liver, and especially the mammæ. Patients have sometimes been known to become dropsical soon after the cessation of the menses. It is by no means unusual also, to meet with an undue determination of blood to the head, indicated by flushing of the face, throbbing of the carotids, vertigo, some degree of numbness or loss of power in the arms and legs, with a failure of memory, partial loss of sight, restlessness, great want of sleep, and disturbed dreams. In others again, the most intractable symptoms of irregular hysteria shew themselves.

If there be no diseased action, however, excited at this time, women will frequently grow fat rather suddenly, and will afterwards often enjoy better health than they ever did during their menstruating life, especially if they have been the subjects of dysmenorrhœa or hysteria.

Emenagogues formerly administered to prolong the discharge.—From the notion formerly so prevalent, that the retention of the menstruous discharge was injurious to the system—the fluid being supposed to be of a malignant nature—emenagogues of the strongest kind were had recourse to, for the purpose of prolonging its duration to as late an age as possible. No practice could be more censurable; for if the medicines had any stimulating effect on the uterus, they must very much irritate and predispose it to diseased action, since its susceptibility to derangement is now so great. If they had no effect on the womb, it must be evident that they were useless so far as that organ was concerned; but by stimulating the intestines, the kidney, the bladder, or some other viscus, they might be productive of serious mischief. The idea of the generation of malignancy had taken so deep a root, that issues and setons—a custom adopted from the Arabian physicians—were applied to different parts of the body, to procure an artificial evacuation. This practice must be reprobated equally as strongly as that of stimulating by internal medicines. The decline of the discharge is a natural consequence of age, and nature must not be interfered with in her operations.

Treatment.—Provided the health be tolerably good under this change, no medical interference is necessary; our only duty consists in keeping the bowels moderately open, and persuading the patient to take gentle exercise. If, however, as sometimes happens, a large quantity of blood be formed at this time, or congestion take place in any particular organ, we must administer appropriate remedies. We may bleed from the arm, apply leeches or cupping glasses to the neighbourhood of the organ affected, purge, and keep the patient on the antiphlogistic regimen. Some women form blood so fast after the cessation of the menses, as to require periodical depletions; and many accustom themselves to the application of the cupping glasses on the back of the neck every two or three months.

If glandular enlargement in the mamma occur, either of a malignant kind or not, the woman's fears will generally be very much excited, because it is so commonly known that cancer often appears at this epoch of female life. Should it be of a cancerous character, early excision is the only remedy; if it be merely an inflammatory state, or what is called an *irritable gland*, leeching, fomentation, and purging, will generally be sufficient to disperse it. These are the sort of cases which have been mistaken for cancer cured. I fear there never was a case of true carcinoma cured, either by the exhibition of internal medicines, or by outward applications. Many times medical men of great experience have been deceived in this respect, having suspected the case to be cancer when the event has proved it not to be of a malignant nature: so difficult is the diagnosis occasionally.

It is not necessary for me to enter into the discriminating marks; they will be fully treated of by my respected colleague, Mr. Scott.

Sometimes symptoms of malignant disease of the womb occur, such as pain in the uterine region, and loins; a white and ichorous discharge from the parts; blood passing either in a coagulated or fluid state; wasting of the body; hectic fever; a sallow complexion and anxious countenance. Whenever such symptoms manifest themselves, we should expect the existence of organic disease, insist on making an examination per vaginam, and treat the case accordingly.

SUSPECTED PREGNANCY.

It is not a very unusual thing for a young woman who has been married two or three years, and never been pregnant, to fancy herself with child because she misses the return of the menses. The temporary suppression will probably depend on some general derangement of the system, under which the stomach sympathizes so completely, that we have dyspepsia, sickness,

the formation of a large quantity of flatus in the bowels, a loss of appetite, loathing, and all those symptoms well known by females to be concomitants of early pregnancy. The patient fancies that the sickness is indicative of her impregnated state, as also the defective appetite;—she will prepare for her accouchement;—she gives way in her dress;—the bowels, which ever since her infancy had been compressed by the unnatural system of tight lacing, are allowed free liberty, in consequence of the artificial support being taken away. The abdominal muscles—which were intended by nature to restrain these organs, and preserve them compact—being flabby and relaxed, from their powers never having been called into requisition, refuse to brace them as they ought. The intestines, thus left loose, soon become distended with gas evolved; the enlarged bulk is considered as depending on the growing womb; and the rumbling of flatus in the bowels is mistaken for the motion of a child.

Another very frequent symptom of pregnancy is the enlargement of the mammæ, and occasionally also a slight secretion in the breasts, of a serous character, in appearance not unlike the milk of a nurse. The woman, therefore, anxious for a child, and very desirous to assure herself that the symptoms she experiences are the effect of pregnancy, is constantly applying her hand to her bosom, in order to observe whether it is getting larger, whether the nipple is increasing in size, and whether any fluid is secreted; the very irritation causes a determination of blood to the breast; this determination produces a slight increase, and perhaps also a secretion of fluid; and with such proofs to corroborate her own anxious wishes, she has no doubt whatever on the subject. She makes up her mind that she is certainly pregnant, and her medical adviser is retained to attend upon her.

Now it is very possible that we might, any of us, be deceived by the history of a case of this kind, and by the general appearance of the patient; but if any doubts exist on our parts, we can generally ascertain pretty correctly whether the increased size is owing to the enlargement of the uterus or not, by merely laying our hand on the abdomen. Under this examination, instead of finding a circumscribed hard tumor, with a certain degree of elasticity, obvious to the touch, we observe a soft uniform distention throughout the whole abdominal cavity, having a tympanitic or more doughy feeling. We may sometimes, by putting a pertinent question to the patient, ascertain that the motion she experiences is not that of the child. If we ask her where it is she feels this motion, she will tell us that sometimes it is as high as the stomach, and sometimes low down in the hypogastric region; sometimes on one side, and sometimes on the other. It is impossible that this feeling can be caused by the movement of a child; for, being a prisoner within the uterus, its motions are confined to one spot, and the sensation cannot be extended throughout the whole abdominal region; as is the case with the rumbling of flatus.

Well, then, from these circumstances we may suspect that she is not pregnant; and if, under such suspicions, we are allowed to make an examination per vaginam, we shall be able to arrive at a positive knowledge on the subject in the way I shall hereafter notice. But suppose you entertain so strong a suspicion as almost amounts to a certainty that your patient is deceiving herself with false hopes, and perceive that she has fully persuaded herself she is *enceinte*, I would strongly advise you, even then, not to tell her abruptly your opinion; for you will certainly surprise and disappoint her; most likely fail to convince her immediately, and probably lose the confidence she placed in you. She will think that you are wrong and she is right; she will apply to another practitioner for his advice, who may treat her in a different manner; and if you once lose a patient in this way, it is not to be expected that you will ever be consulted for her again: for she will feel a consciousness of having wronged you, and it is not in human nature for us to throw ourselves in the way of those towards whom we know we have acted unjustly. Thus it is right, as well for her sake as your own, not at once to declare your suspicion, but to hint at the possibility that there may be a mistake—that cases are often occurring in which even mothers of families have been deceived. These observations, however, only apply to the woman herself; it would be quite proper for you to give a positive opinion—to a certain extent guarded—to the husband, or some friend. If you have much doubt indeed as to whether she is pregnant or not, it would perhaps be better merely to hint the suspicion; and to wait beyond the time of her expected accouchement, before you give a decided opinion to any person; or before you make use of any strong remedies.

Treatment.—The management of a patient under this state, is of comparatively little importance: the bowels are to be kept free—the secretions corrected—tonic and aromatic medicines may be given: we must take care that she has a proper quantity of proper food: she may be sent into the country; and in time we shall most probably find that the fulness subsides, that the health improves, the menstrual secretion is restored; and she will return just in the same state as she was before

the suspicions arose. Time will relieve all the anxieties, and dissipate all the doubts; and patience is the best physician.

Let us not, however, treat any case that may come before us lightly, because we must bear in mind that such an enlargement may be the consequence of organic disease in some of the viscera, particularly in the ovaries; for young women are by no means free from the chance of ovarian tumors.

LEUCORRHŒA.

Our next subject is *leucorrhœa*—a term compounded of the two Greek words, λευκος and ῥεω. Not to advert to those cases in which there is a white discharge from the vagina, consequent upon, and symptomatic of, organic disease existing in the womb, or inflammation of the vagina (which subjects will, in an after part of the course, come particularly under consideration), idiopathic leucorrhœa, as it may be termed, occurs under two states of the system;—the one arising from an increased quantity of blood actively determined to the part;—the other from passive debility of the vessels.

Definition.—We may define leucorrhœa in general to be an increased discharge flowing from the vagina, in colour approaching white, but varying in consistence and opacity;—produced by a debilitated state of parts;—or by some morbid action of vessels, the consequence of inflammation, organic disease, or a relative alteration in the situation of the pelvic viscera.

Inaccuracy of Cullen's classification.—Cullen has made it a species of menorrhagia, under the name *M. alba*. It might, with more propriety, be classed in the order *apocenoses* of local diseases.

It is a very common complaint; indeed few women pass through their whole life without becoming the subject, at one period or other, of leucorrhœa. It is supposed by females to be the cause of any disease under which they may be at the time suffering: but this is an erroneous idea, as it is generally merely an effect and symptom of some local complaint. It may, however, in its turn, become the cause of increased debility and of actual disease, if it continue for any great length of time. From the frequency of its occurrence, the various kinds of constitutions it attacks, and the different character of the fluid secreted, it is very difficult to give a concise, and at the same time true, history of the affection. In the sketch I shall present to you, I have followed the arrangement and division adopted by Sir C. Clarke; to whose excellent work I acknowledge myself indebted for whatever valuable observations may be found in it.

Etymology.—Hippocrates calls the disease γυναικεια, λευκα; Sydenham gives it the name of *fluor muliebris*; Dr. Cullen treats of it under the title of *leucorrhœa*; Drs. Denman, Mead, Heberden, and Burns, call it *fluor albus*; Sir C. Clarke *vaginal discharge*; Dr. Hamilton, *sexual weakness*. It is commonly, by women, called *a weakness*, or *the whites*. The term "weakness," is a very improper and unfortunate name; because it has frequently led practitioners to give strengthening medicine, and women also to have recourse to the same kind of regimen and food, which may prove highly injurious.

The discharge is produced either by the mucous membrane, or the lacunæ of the vagina, the glands of the os uteri, or by the membrane lining the womb. It most frequently has its origin from the vagina, because of the extent of the vaginal surface. I have already mentioned that this canal is moistened by a fluid secreted by the follicles and vessels of the mucous membrane; and to this the secretion from the lining of the uterus and the glands of the os uteri is added. The balance between the secretion and absorption is naturally most exact, except under particular excitements—under some states of disease—and under labour: consequently very little or no moisture appears externally. In some diseases of the parts the fluid is poured out in large quantity; and whether it proceeds from the vagina solely, or from the uterus, it receives the name of *leucorrhœa*. In fact, women call all discharges from the vagina, not tinged with red, "the whites;" even to the acrimonious, ichorous discharge of cancer, they apply the same term. It may be merely an increased secretion of the natural mucus, possessing a transparent and glary appearance, somewhat like the white of an egg, tenacious and ropy;—it may be white and opaque, originating in inflammation of the membrane;—or actual pus, the produce of an abscess or ulcers of the vagina;—or of an ulcerated state of the womb. Its most common character, perhaps, is of the appearance and consistence of cream; scarcely so thick; easily diffusible in water; secreted by the vessels under a state of debility.

The true leucorrhœa is not infectious; it produces no disease in a man who cohabits with a female labouring under it. Sometimes it appears instead of the menstrual discharge, and then most likely it has its origin from the uterus. I shall first speak of the

TRANSPARENT MUCOUS DISCHARGE, PRODUCED BY INCREASED ACTION.

Women of naturally plethoric habits, who have reached the middle period of life, who are corpulent in person, who indulge much at table, lie long in bed, drink rather largely of ale, wine, or

spirits, and take little exercise—are apt to form blood too freely; as may be observed by the superficial vessels of the body—especially in the cheeks—being turbid and full. Although there is, in such subjects, an appearance of strength, they are unable to bear exercise; and this inability obliges them to become necessarily idle. Such women are liable to giddiness, or sensations of sparks before their eyes, and threatenings of apoplexy: they are sometimes relieved by spontaneous epistaxis. With them, you will usually find most of the secretions profuse, and the vaginal discharge more copious than is common. Enlargements of the liver and other viscera are likely to be induced, and the patient may be cut off suddenly by apoplexy, or may die dropsical. If the discharge continues for any length of time, it will, by the constant drain, add to the weakness induced, and itself become the cause of increased debility. Thus what was a consequence of irregular actions, may at length become the origin of serious disease. A medical opinion is seldom sought merely because of the leucorrhœal discharge, but in consequence of the health breaking: the disease has usually, therefore, reached some degree of inveteracy before treatment is had recourse to.

Symptoms.—The symptoms which are attendant on this variety of leucorrhœa, independently of those belonging to uterine irritation, are such as we should expect to find accompanying a full habit of body, with impaired energy in the animal functions. They are a full, and perhaps hard, pulse; loaded tongue; bloated countenance; scanty, unhealthy, and slimy alvine evacuations, varying considerably in colour and consistence, and indicating an irregularity in the secretion of bile; disturbed sleep; occasional pains in the head, side, or bowels, often of an erratic character; a constant dull pain in the back, increased on any exertion, even walking or standing; and defective, or more generally profuse, catamenial secretion.

Treatment.—Under this case, our first object must be to unload the vessels by bleeding pretty freely, and to restore the chylopoietic viscera to a healthy condition, by means of occasional purgatives and alterative medicines, light and nourishing diet, and suitable exercise; then to moderate the vaginal discharge, and to lay down proper rules of management, to prevent a return of the symptoms. The general plan it is unnecessary to dwell upon. During the plethoric state, the only local means to be used consist in the injection of warm water, or mucilaginous solutions, into the vagina or rectum. After the symptoms of plethora have ceased, weak solutions of lead or sulphate of zinc may be used in its stead, three or four times a day. All causes of local irritation must be avoided; and should the discharge continue, and debility be induced, the tonic plan, recommended in the next variety, must be had recourse to; namely, the

TRANSPARENT MUCOUS DISCHARGE ARISING FROM DEBILITY.

To this women are particularly liable whose vagina has lost its tone; it is rare, therefore, in virgins; most frequent in women who have had many children; and those who lead dissolute lives.

Causes.—The causes are to be found in many or laborious labours; in frequent abortions; in rising too soon from bed after a miscarriage; fatigue or cold; chronic diseases; profuse hæmorrhages; anxiety of mind; *venus immodica:*—any thing, indeed, which may tend to weaken the constitution, as well as any cause likely to relax the folds of the vagina, will produce an increased secretion from the vaginal membrane. Women who live in heated rooms, who spend much time in bed, and keep late hours, and those who inhabit a moist country, are more frequently the subjects of it than those who take exercise in the open air, who do not follow the perverted fashions of the day, and who reside in a salubrious neighbourhood. Thus it is found sometimes endemic in low marshy situations, and in Holland. It has been said to be produced by suckling a child too long, and it has subsided on the infant being weaned.

Symptoms. — The symptoms cannot be mistaken. The discharge is the most prominent, and with this there is pain, or a sensation of weakness in the back and loins. The continued drain decreases the quantity of circulating blood; so that the face becomes pale and leucophlegmatic, almost resembling that of a dead body, with a dusky yellow tinge; the yellowness is not the effect of bile circulating in the vessels, but produced by the capillaries not being sufficiently distended with blood, and the sebaceous glands appearing through the transparent cuticle. This is proved to be the case by the urine possessing its ordinary colour: it is not so highly tinged as in jaundice. The tunica sclerotica of the eye also retains its beautiful pearly whiteness, and has not the yellow hue always apparent when bile is mixed with the blood. The pulse soon becomes feeble and languid; sometimes it is quick, at others, lower. Shortness of breathing succeeds, which is increased by the horizontal posture, by attempting to go up an ascent, or by reading aloud. Violent palpitations are frequently observed to so great a degree as to bring with them the sensation of immediate dissolution, espe-

cially on exertion. The tongue is generally not furred, but moist, smooth, and shining, appearing larger than usual, as if it were œdematous, marked strongly on the edges by the impressions of the teeth, and perhaps lobulated. This enlarged lobulated appearance of the tongue always augurs great debility. There is generally irregularity in the menstrual function; sometimes complete amenorrhœa; more frequently a scanty secretion, at somewhat uncertain intervals. The extremities become colder than natural; œdema of the legs and feet comes on, with great torpor of the body, and a disinclination to exercise. The digestive organs soon become impaired; the appetite is lost; the bowels are constipated; and flatulence and dyspepsia supervene. Sometimes the patient sinks under symptoms of water in the chest; or perhaps will gradually waste without any very prominent indication of organic change manifesting itself.

Treatment. — These formidable appearances may mostly be removed at the commencement; but our means must be continued with energy and patience: a few doses of medicine will be of no use; a long continued system is the only plan from which we are likely to derive advantage. Our first care must be to remove the cause. If the patient live in a low situation, she must be carried to a better air, out of the influence of the exciting cause. It is remarked by Sir Charles Clarke, that he has repeatedly seen this complaint, attended by the worst symptoms, subside on the removal of the patient into the country, with the addition of but little medical means. Regular habits must be enjoined, and early rising; and if the patient be too weak to remain up long, it will be better for her to lie on the sofa than the bed. She should take exercise in a carriage in the open air when it can be borne. Bathing in the sea, or a cold or shower-bath, is beneficial when the system has rallied a little. The food must be of the lightest and most nourishing kind—such as jelly, broths, and tender meat; together with small quantities of wine, and probably claret will be the best.

The medical treatment must be directed to invigorate the system through the stomach, and to restrain the discharge. The system may be strengthened by the diet above recommended, and by tonic medicines—first of the mild kind, as infusion of calumbo and carbonate of ammonia; and afterwards a course of steel. Here you will find the sulphate of iron, in the form of a pill, as previously recommended in amenorrhœa, probably the best preparation. Sulphuric acid is an useful and grateful tonic; it may be combined with bark; and the tincture of kino, in half drachm or drachm doses, has been much extolled. Stimulants, to act directly on the neighbourhood of the vagina, have been freely exhibited by the stomach: such are the tincture of cantharides; also turpentine, copaiva, and some other resins. Emetics have been recommended to give a fillip to the constitution, and increase the proper secretions of the intestines. I have a great objection to emetics in this disease, because they interfere with the proper digestive actions of the stomach, and keep the patient for some time in a state of nausea, which of itself acts as a cause of debility. From some recent trials by Drs. Spajrani and Bazzoni, in Italy, and Drs. Negri, Marshall Hall, and Ryan, in this country, it would appear that small doses of the secale cornutum have an influence over this disease in the chronic state: I have had no experience of its efficacy in leucorrhœa, although I have seen decided benefit from it in menorrhagia. The bowels must of course be attended to; and the warm purgatives will be found most useful. I must warn you particularly against exhibiting mercury here in large doses. If given in such quantities only as will correct the secretions, it will generally be serviceable, by aiding digestion; but if it be carried to salivation, it must be injurious. Mercury, it is well known, besides stimulating the numerous absorbents of the system, prevents the deposition of coagulable lymph, and even causes its removal when it has actually been formed,—a process which we have an excellent opportunity of watching in some cases of iritis. It also destroys and diminishes the quantity of the red blood circulating in the body, by exciting to increased secretion those organs which expend the greatest portion of the red globules:—thus the liver carries off an immense quantity of the richer parts of the blood in the formation of the bile; and the same may be remarked of the salivary and pancreatic glands, the secretion of all which organs we know is much increased by the mercurial action; so that under a course of mercury the vital fluid rapidly diminishes. Hence the value of this mineral as an antiphlogistic remedy, and hence the danger of exhibiting it in diseases attended with much debility, and depressed arterial energy. Among such may be classed long-continued leucorrhœa; and it cannot but be unwise to exhibit largely a medicine which decreases the supply of blood, already too scanty for the purposes of healthy function. Besides, if we should unfortunately press it to salivation, either intentionally or not, we are adding much to the weakness of the patient, by having set up another debilitating drain. Injections are excellent coadjutors. These may consist of a solu-

tion of alum in water: a drachm may at first be used to a pint, and increased by degrees as the vagina will bear it. Sulphate of zinc is another excellent astringent; or alum and sulphate of zinc may be used in combination. The vegetable infusions are occasionally of great service; such are a strong infusion of green tea, or decoction of oak bark. Dr. Jewell, two or three years ago, strongly recommended the lunar caustic in injection for this complaint, commencing with the proportion of two grains to an ounce. In some instances, this preparation has put a stop to a chronic leucorrhœa, when no other injection appeared of the least advantage. A patient of mine is using it at this time, and has derived decided benefit from it. It is an unpleasant application in its use, from its staining the patient's linen, and every thing it touches, black. Proper cautions must, therefore, be advised; but if employed with discrimination, this is the only objection attaching to it, as far as I am aware.

Most women have a strong prejudice against the use of injections of any description, perhaps because they may have heard that they are had recourse to in venereal complaints; and on such a means being suggested, in the first instance, it is very probable our patient may object to their employment. But a very little reasoning will be found sufficient to persuade her to adopt them, if we can hold out any hopes of their proving beneficial. To obtain the full benefit arising from their use, the hips might be raised above the level of the trunk, so as to allow the fluid to remain a little time in the vaginal cavity by gravitation. In continuing them for any length of time, it will be necessary not only to increase their strength, but also to change the ingredients occasionally, sometimes making use of one, at others of another kind. A caoutchouc bottle, large enough to contain two fluid ounces, having adapted to it an ivory tube of an inch and half in length, perforated at the extreme end by five or six minute apertures, and protected at that attached to the bottle by a small shield, will be found the most convenient form of syringe.

It is not every case, however, of white vaginal discharge to which the application of stimulating and astringent injections is suited. Wherever active inflammation exists, either in the vagina or uterus, they are inadmissible: they also tend to do harm, if there be any organic disease of the os uteri incipient or developed; and I am persuaded I have seen the malignant affections of this organ hastened to their fatal termination by an improper perseverance in their use. It may be laid down as a good general precept, that, in all cases where there is much acute local pain, especially of a lancinating kind, in the region of the uterus, and where the injection itself produces much suffering, they are likely to be highly prejudicial.

From particular circumstances operating this session, I shall be compelled to defer the consideration of the Organic Diseases of the Uterine System till near the termination of the course. Our next subject will be the Physiology of Generation.

CLINICAL LECTURE

ON

ANEURISM AND THE TYING OF ARTERIES.

Delivered at the Middlesex Hospital,

BY SIR CHARLES BELL.

(Continued from p. 334.)

I MUST not regret the interruption which we met with at the last lecture. It is to be wished that you should see rather than hear, and that you should feel the difficulties of the surgeon, and so learn to anticipate what may occur in your future practice. It is above all to be desired, that, after having witnessed these occurrences in practice, you may be excited to diligent study, and to compare what you see with what you read.

I was leading you to consider the cause of the bursting of the external iliac artery, and of secondary hæmorrhage after tying the carotid. Now these are circumstances which I cannot overlook, if I am, for the time, to comment on the practice and the occurrences in the hospital.

Bursting of the External Iliac Artery.

You will observe that, after tying the external iliac artery, the artery bursts out on the seventh day. You are thus in possession of a fact upon which you will afterwards proceed and reason. The next thing that I find noted down in the case is the course of symptoms which preceded the bursting of the artery, (and these are very important for you to notice): "general uneasiness; no sleep; restless and tossing; the countenance anxious; a dead feeling in the limb; the tumor full and hot; tenderness in the abdomen; the breathing hurried; the tongue dry." How are these symptoms to be treated; or rather, how may they be avoided? By making the incision extend over the artery with the greatest precision; by having it just of the right length, so that you may reach to the depth of the artery without the necessity of poking and fingering in the wound; by taking care, in short, that you make such

a wound as will be disposed to heal by the first intention, and that no inflammation be excited in the neighbourhood, more especially in the tumor or aneurism itself. It is this inflammation which gives rise to the constitutional symptoms detailed in this note of the case.

In the ligature of the great artery of a limb, be careful, above all, to have the threads in contact with the artery; because if they be not in contact, they will not produce that inflammation which is necessary for the final closing of the vessel. This is a principle which reflects on all attempts at compressing the artery. If, for example, any one attempts to compress the artery at the wrist, and if there be a portion of fat, or the sheath of the vessel, or any thing interposed between the compress and the artery, the compress will close the vessel mechanically, but it will not inflame it; and consequently the time arrives at which the blood bursts out again. (I am stating this in illustration only, for the artery at the wrist should be neatly tied, not compressed.) In the same way, when you put a ligature round an artery, including nerve, and vein, and cellular texture, the artery, not being influenced by the contact of the ligature, does not inflame; the cellular membrane wastes, the ligature becomes loose, and you have secondary hæmorrhage. On the other hand, do not insulate the artery, because you recollect that the artery has to go through a process of adhesive inflammation; and if you dissect it up, and lift it with the finger, and separate it, you are taking away all its connexion with the surrounding vessels; you are breaking those connexions by which the life of the artery is sustained, and through which only the parts can inflame; for it is the process of inflammation after all, by which the vessel is to be secured. Therefore, do not insulate the artery; do not cut the coats of the vessel if you can help it; endeavour to stop the course of the blood through the artery by the ligature, without causing too much weakening of these coats; do not, therefore, use a round small thread, as if it were for the very purpose of dividing the vessel. I say that a ligature of three or five threads of fine silk is a proper size for a large artery. Do not cut off the ends of your ligature; this was another proposed improvement, viz. that you should take a very small thread, that you should draw it tight upon the artery, and cut off the ends of the ligature close to the knot. No; the profession has determined upon this, that it is not a right practice, and the reason has been, that serious consequences have resulted from it, not merely by giving rise to inflammation and suppuration at a distant period, by which the knot is discharged, but by preventing the ligature from being removed in those cases where you are sometimes required to cut it off. You may very well say, I will take care that this removal of the ligature shall not be necessary; however, I am not speaking to A or B, but through you to the profession generally, and I say, as a rule, it is dangerous to cut off the ends of the ligature close by the knot, if it were only for this circumstance that it is sometimes necessary to take off the ligature. The ligature employed in a case of aneurism sometimes hangs for twenty days or more. When this occurs in a stump, it is owing to the threads getting entangled with the granulations; but when it occurs where the ligature is placed around an artery, in a case of aneurism, it is a troublesome thing, because it keeps the surgeon in anxiety, the patient being still in danger, and you desire to have it cut off. Now will you, in studying this department, remember a very ingenious idea of my excellent friend, Mr. Travers, that of tying the ligature with a noose, drawing it tight, doing an injury to the artery, and then taking the ligature off again. After this method you will find the operation performed by Mr. Crampton, with his peculiar instrument, by which the artery is compressed till the clot is formed within it, and the coats sufficiently injured to be excited to inflammation; and then the ligature is removed. As I went round the wards, you saw a senior member of the profession with me, Mr. Hettling, and he shewed us a very ingenious instrument, which appears to me to be a good instrument, from its extreme simplicity. It was a silver tube about one-third of the diameter of a common catheter, in length about two inches and a half, somewhat flattened, smooth at the end, with a hole near the extremity, which hole passed quite across the tube. Now, when the ligature is placed round the artery, this silver tube is put on the end of the ligature, pushed down to the artery, and the knot is tied, leaving this delicate little instrument included in the knot. The time arrives at which the application of the ligature has sufficed; it has caused a coagulum to form within the vessel; and the irritation and inflammation in and around the artery has given rise to the deposition of coagulated lymph between its coats, and within them. You desire now to take away the ligature, that there may be no slough, or that you may close the wound before the day of danger, which, in this case of tying the external iliac artery, was the seventh day. There is a little stilette, then, formed so as to be pushed through the tube, and going down to the end of it, and passing the hole through which the ligature has been drawn, it divides the ligature, and the whole comes away. I

think it is an ingenious, effective, simple instrument, and I therefore introduce it to your attention. But I repeat. that the history of this part of practice is not uniformly progressive. It has been long ago observed, that ingenious contrivances for securing the artery have not succeeded; and we may say now, that other equally ingenious inventions do not uniformly succeed, so that I am not prepared to change my practice—I mean the use of the single ligature. Indeed, to go fully into this inquiry, and determine as to the propriety of cutting or removing the ligature, we should require to take a critical survey of the cases treated by Mr. Copland Hutchinson, Sir Astley Cooper, Mr. Travers, Mr. Crampton, Scarpa, and others.

Tying the Carotid for Aneurism by Anastomosis.

Recurring to the subject of aneurism by anastomosis, I gave you reasons why we should early extirpate those tumors called nævi—those small blue spots in children, which threaten to become converted into this very serious disease. This is the excuse, then, for performing so formidable an operation in young infants; for you must not be too free with the operation of tying the carotid artery; it is a dangerous operation; and the history of this tumor furnishes our only excuse for tying this artery.

You will find it recorded, that a pulsating tumor of this kind, in the orbit, was cured by Mr. Travers by tying the carotid artery; and a similar case is related by Mr. Dalrymple, of Norwich. These were the facts which influenced the consultants upon the case of the child to whom I now refer, and in whom the carotid artery was tied. There was a bluish tumor, soft in texture, obviously containing blood, having no coagulum, no irregularity, nothing of the appearance of true aneurism, but altogether of the character of nævus. It was around the angle of the jaw, before the ear, near the throat, in that situation in which you could not extirpate it with the knife. Then came the question as to the propriety of tying the carotid; and you find that the voice of the consultants determined upon its being done. Well, I confess that I am against it; and now, if you choose, my reasons may come in the form of an apology why I am against it. Supposing that this sort of tumor were an aneurism—supposing that the term which my brother has given to it were correct—then the operation might be performed; supposing, however, that this growth is not an aneurism, but a tumor, then I hold that it is not correct so to operate; because in aneurism you tie the artery, stop the force of the blood flowing through it, produce coagulation, and finally a cure. But there is something more required for the destruction of a tumor. What is the definition of a tumor? It is not enough to say that it is composed of matter foreign, and different from the common texture; we bring into the definition of a tumor the action that is producing it. A tumor has a disposition to secrete certain matter, or to build up a certain structure. We cannot, by merely retarding the force of blood, alter that disposition; and if we do not alter the disposition, the force of circulation will certainly, after a time, be restored through the inosculations. Being, then, of opinion that this is a *tumor*, you see the course of reasoning in my mind, and why I think that the tying of the carotid artery will not be effectual. As strengthening this opinion, some of you may recollect a patient brought in with a pulsating tumor on the side of the head, in which the temporal artery had first been ineffectually tied, and then the carotid with no better success. You perceive that we must return to the subject of inosculation.

You will require me to say, why is it that a part remote from the heart is as plentifully supplied with blood as a part near the heart? Because there are two powers in operation—the heart's action and the arterial action, and if the part be remote from the heart, it has the greater arterial power influencing it, proportioned to the diminished power of the heart. Here, then, the physiological fact comes in explanation of the circumstances of practice. When you tie the main artery, a thousand inosculations take upon them the office of that artery, and presently you will find that the blood runs into the main artery below your ligature. It does so in the common operation for popliteal aneurism, and if time be given, these inosculations will enlarge, and at length the circulation will be perfectly restored. Now, in the head, you know that we have two carotid and two vertebral arteries, and not only are these four arteries taking the place of what you term the main artery in a limb, but if I may use so poor an expression, nature is solicitous that the vessels on both sides should inosculate with unusual freedom. These considerations, I must confess, diminish my hopes of success from tying the carotid in this case. But you will yourselves notice the fact—and it is a most important one—that already the tumor is considerably diminished; and let us wish and pray that it may not be half diminished, but altogether absorbed, and carried away.

[Sir Charles Bell, recurring to this case in the succeeding lecture, observed, that he was again called to a consultation on this child, to determine on the propriety of operating on a similar tumor situated on the opposite cheek. The consultation determined against using the knife. "I take

blame to myself," said he, "for not having noticed this tumor on the opposite side before; it would have been an additional motive against tying the carotid; for, if stopping the course of the blood on one side should be effectual in diminishing the tumor, the force of circulation directed circuitously to the other side, should be equally powerful in adding to the turgescence of the tumor there."]

Secondary Hæmorrhage after Tying the Carotid.

The next practical question which we may, with all propriety, entertain, regards still the freedom of inosculations, especially between the arteries of the head. There is no occasion for the formality of a case being drawn up; for the whole important circumstances which I have to refer to are before you. A gentleman, in a state of irritation and temporary derangement stabs himself with a penknife under the ear. He is brought into the hospital, and the bleeding has ceased. It appeared subsequently that he had struck the artery. I have known a similar occurrence:—An unfortunate lady resolving to destroy herself, in a state of great depression of mind, takes the volume of our system of anatomy which treats of the arteries; she reads the account of the carotid, and carefully noting its situation, and feeling its place with her fingers, she puts a small penknife directly into it. She was found in the morning hardly sensible, the room deluged with blood, and herself deprived of motion on the opposite side of the body. The bleeding had been so profuse, the arterial action so reduced, that time was given for the formation of a clot where the artery was punctured; the parts closed in the course of the deep and narrow wound, and a pulsating tumor formed. You will perceive the slight difference between this case and that of a true aneurism of the carotid with regard to operating. The carotid artery was tied by my brother. The incision was made of two or three inches in length, upon the edge of the sterno-cleido-mastoideus muscle; the platysma myoides was divided; and the main artery tied: the operation was effectual. See, then, the necessity of carrying the principle with you. How was this operation successful? Because, although the tumor was occasioned by the puncture of the artery, yet it had all the characters of true aneurism; inasmuch as it was a small, circumscribed, pulsating tumor, resembling that which takes place at the bifurcation or division of the carotid. Had the wound not closed, had the puncture of the artery still bled, the rule of practice would have been very different.

Let me take this opportunity of explaining to you what I know of true carotid aneurism, and how I came by it. I think I must have been younger than any gentleman in this room, when I saw the first case. I was attending the hospital, and going round with the physicians; I saw raised from a woman's neck a large poultice, and I was so far initiated into the profession at that time, that I could perceive that they were wrong;—that they were fomenting and poultieing an aneurismal tumor of the neck. I followed the case up with great interest: the tumor enlarged; difficulty of respiration came on, with cough; the cough increased in frequency; effusion took place in the lungs; and the patient died suffocated. I had an opportunity of seeing the dissection, and I made a drawing of the tumor, which you will find in my brother's works. You perceive what notion I must have formed at that early age of the effect of an aneurism in the neck—aneurism of the carotid. When I had been in London some time, I found that Sir Astley Cooper proposed to tie the carotid artery for this kind of aneurism, and I ventured to say, notwithstanding the great admiration I had of Sir Astley, not as an operator merely, but for his excellent understanding directed to matters of practice, that the woman would die suffocated: and the course of reasoning passing through my mind was this:—I had seen the case where the patient died from suffocation: and I had repeatedly witnessed the effect of tying the artery near the aneurismal tumor in other parts of the body, namely, that inflammation came on, and that the tumefaction and pressure were increased. Now I thought that, as in this case to be operated upon, the surgeon must of necessity cut near the tumor, inflammation of the tumor would be produced, and that this would increase the pressure against the larynx, and cause more irritation and cough, and finally suffocation. This reasoning was correct in that instance: Sir A. Cooper's first patient died. What, then, was the consequence of this operation? the rule which, I think I might say, I could have dictated before. If you operate on aneurism of the neck, see that you operate early; for, if the tumor have increased very considerably, it will, in all probability, increase more after the operation, press more upon the larynx and laryngeal nerves, produce more cough, and so endanger the patient's life by suffocation.

But this is a digression. I am more desirous that you should understand the difference between true and false aneurism, and also that you should be aware that what is termed *false* aneurism may be in its circumstances so like a true aneurism, that you may operate upon it, as in the case of the lady, in which my brother operated, by tying the main trunk of the artery remote from the tumor. You have, I hope, understood, that when you tie the

artery in a common case of aneurism, for example, of the ham, the blood is not altogether stopped, but only retarded in the tumor; so that it coagulates. So free, indeed, are the inosculations, that were you to take off the limb below where you have tied the artery, you would find the blood flowing from the trunk of the artery. *A fortiori*, will not the current be similarly restored in the vessels of the head, where you are not tying the principal artery, but one of four arteries into which it is, as it were, subdivided, for the purpose of equalizing the circulation in every part of the brain? Now, to return to this man, who stabs himself with a penknife. The vessel did not bleed in the hospital. Whilst here he lay under my name, and I am entitled to speak of the case. After two days, he was carried out of the hospital. Hæmorrhage comes on after he is carried home, and the trunk of the carotid artery is tied; the hæmorrhage returns, and he dies. This is the whole history as connected with our subject; and there is no occasion to dwell upon it. These are the important facts, and am I borne out in saying, that it would have been better had this patient remained in the hospital? Certainly I am. And let me tell you how you should treat such a case. You are not to tie the carotid, but, if possible, the artery at the point wounded, and above as well as below the wound. If you look to Mr. Abernethy's Works, which I hope you often consult, you will find the case of a man who had his carotid artery torn by a bull's horn, which entered under the angle of the jaw, and you will, in the detail of that case, understand all the difficulties of taking up the vessels in a wound of the neck. He put a ligature round the carotid, to act as a tourniquet—he drew the ligature, sponged out the wound, and sought for the bleeding orifices, but in vain. He undid the ligature, that he might see the jet of blood; but instead of that, the wound filled with blood, and he could see nothing, and he was constrained to finish the operation by drawing the ligature upon the carotid. Now, I say, that this is wrong. What you have to do in a similar case is, either to enlarge the wound, or to make an incision in the neck low down upon the anterior edge of the sterno-cleido-mastoideus, carrying it through the platysma myoides, that you may insinuate your finger and thumb under these muscles, when, without opening the sheath, you can lay hold of the vessel. Having laid hold of the artery, clean out the blood from the wound, and try to find the orifices of the arteries: you can then open the finger and thumb, and let a jet escape: notice where it comes from, and in the instant, by closing the fingers, stop the blood: by this means you are enabled to find the bleeding orifice. If it be a great vessel, tie it above as well as below the wound. You know that if the artery be opened in the thigh, and you tie it above the opening, the blood in half an hour will come from the lower part, so free are the inosculations; and, indeed, if the secondary hæmorrhage be delayed so long as half an hour, it is only in consequence of the extreme exhaustion of the patient. Will the same thing not happen also in the neck? Remember the rule, then, and the reason of it,—to tie both extremities of the bleeding vessel in false aneurism, or wounded artery. As to the carotid, what can you expect from tying it but secondary hæmorrhage by returning blood. In Mr. Abernethy's case, the patient died soon after the ligature of the artery, from the loss of blood which he had suffered: had he lived, he would have had secondary hæmorrhage from the internal carotid, by the circuitous vessels.

VARICOSE AND INFLAMED VEINS.

The next subject to which I think it my duty to solicit your attention, affords at least an easy transition from the last—I mean varicose veins of the lower extremities. We have had so many cases of varicose veins—they, indeed, try so much the patience of the dressers—and you have seen the formidable consequences of them, that I would be to blame were I to pass them over.

The cases that we are now to treat of, arise purely from mechanical pressure: I should, perhaps, say hydraulic, since the distention of the veins is produced by the length of the column of blood; and the swelling, as distinguished from the cases of nævus, is deficient in the essential character of "tumor,"—I mean its *disposition*. A man comes in, having lost a great deal of blood by the bursting of the veins of his leg. On the other side of the house you find a woman whose vein has likewise burst, and she has lost a very great deal of blood. I need hardly narrate the circumstances, so distinctly does the course of the complaint stand disclosed to you. A man has a varix of the saphena vein, an ulcer is formed on the ankle, it penetrates to the vein, or the vein bursts; some benevolent person gets him into a coach, and he is brought to the hospital; and when he arrives, the bottom of the coach is deluged, or rather matted, with a quantity of coagulated blood. So a woman—a lady, perhaps—having the veins of her leg varicose, shopping and cheapening goods at the counter, the vessel gives way, and she loses pounds of blood. If she sinks down into the horizontal posture it is well, and the bleeding ceases, or is easily stopped; but if she be held up, she may suffer an

alarming loss of blood, because, in this condition of the vessels, there is nothing to prevent the discharge of blood from the heart and veins of the neck down to the veins of the ankle. Now, observing the height of the column, it will be understood with what force the blood may be poured out. It is necessary that you should consider this worst condition of varix of the lower extremity, in order that you may pay due attention to the less severe cases, by seeing to what they may come.

I will describe the appearances, that you may notice the condition of the limb as you go round. You find, very frequently, an ulcer at the lower part of the leg—perhaps at the ankle; and you observe that a great portion of the leg itself, near the ankle, is of a brown or dark modena colour, implying that the circulation is not free—that the blood there is not sufficiently oxygenated. It is, in fact, delayed or retarded in its ascent; and the source of life and vigor being in the lively circulation of the blood, the part becomes constitutionally weak, so that the slightest scratch produces an ulcer. Observing the lower part, you trace up the vein, and you find the saphena running on the inside of the knee, or the lesser saphena running into the popliteal cavity, much enlarged, and forming clusters of veins obvious to the eye. When you put your finger on them, you feel them exceedingly irregular; the part sinks, as if the vein were soft and compressible, and around this compressible point you have a caked or hard feeling, indicating that inflammation has repeatedly taken place in the coats of the vein, or around the vein, so as to harden and consolidate the cellular membrane. You trace the vein up on the thigh, and you find that it is larger than natural; and you trace it by its fulness into the groin, where it gradually gets deeper under the integuments, to join the main femoral vein. What is the cause of this condition? There is still a little obscurity here. You find that it most frequently takes place in women, and the reason is, that from their confined way of life they are more subject to constipation; and also that the vein suffers from the pressure of the womb during gestation, or from forcing in labour: hence you find a varicose condition of the lower extremity to be most frequent in women. But this does not explain why the complaint is more frequent in the left side, which I believe has been observed. I am inclined to think that it is more frequently seen in the left side, just as we see all other diseases more common in this side than the right, from a constitutional weakness there: however, I must not press that argument. You will also see that the womb, which does not hang in the true pelvis during gestation, but is, as it were, on a shelf, lying upon the brim of the pelvis, or the wings of the ilium, must impede the return of the blood: but whatever be the cause of the blood being obstructed in its return, the vein dilates. You will remember that there are certain valves which stand across, and exactly correspond with the diameter of the vein; but if the calibre be enlarged by dilatation, then the diameter or the valves will no longer correspond with the diameter of the veins, and the blood will pass the edges of the first set of valves, then of the second, then of the third, and so the column becomes in this manner lengthened, and the pressure increased in consequence. After a time, the valves in all the length of these veins having failed, the effect of the pressure of the blood on the leg and ankle is extreme, and there is great pain. I should notice, indeed, for it is not much observed, that the pain becomes sometimes excessively severe whilst this state of the vessel is taking place in the thigh; and an acute attack of inflammation attends it, marked by a broad firm cake in the integuments over the vein, sometimes as large as your hand. I may hint to you that I have repeatedly seen the pain, in the early stage of this distention of the veins, on the inside of the knee and head of the tibia, mistaken for pain in the bone. When the varicose condition of the limb has advanced, there is a disposition to throw out coagulable lymph. The veins being still dilated, and the valves useless, the circulation becomes torpid in the leg, a sort of congestion takes place that darkens the colour of the integument, as I mentioned before, and so you have ulceration, and all the other consequences.

Be pleased to observe the heads which I will now lay down for your consideration with regard to the treatment. First, bandaging or strapping the limb, or applying the laced stocking, which are on the same principle; then tying the vein, as proposed by Mr. Hunter and practised by Sir Everard Home; then the application of an elastic truss on the vein in the thigh; next the cutting of the vein; and lastly the application and the effects of caustic—the unhappy effects, because it is those which form my excuse for speaking on the subject at present.

Some fifteen years or more ago, this practice of using caustic for the veins was introduced into this hospital by Mr. Cartright, and has been followed with uniform success. You have yourselves seen many cases cured, and dismissed. But it happens, I would almost say opportunely, in one of my own patients, and also in others in the house, that a succession of abscesses have formed along the vein, towards the groin. This is an alarming occurrence, as

implying inflammation in the interior of the vessel. Let us, then, attend to the circumstances which have preceded this. It appears that the caustic has been applied as a paste; further, that there has been hæmorrhage on the separation of the slough, which implies an exposure of the interior of the vein; in short, the general success of the remedy has, it would appear, made you careless in its application. I have to advise you to use the potassa fusa, rubbed on the spot, and not to put on the caustic paste; and you should limit your object to the production of a slough around the vein, without penetrating it. Besides this, you ought to put a compress above and below the part of the vein where you apply the caustic, so that the vein may remain flat and empty during the whole process. If you do not do this, the coughing of the patient will produce such an impulse along the column of blood, as to tear open the vein.

I regret that I must interrupt the discussion here. But let me take the opportunity of pointing out to you some of the considerations which should engage you—the inflammation of the vein from bleeding—the inflammation of the saphena when tied or cut, or opened with the caustic—the inflammation of the iliac vein from a cause internal, as from inflammation of the uterus—sometimes after labour, sometimes from caneer, or other chronic disease of the uterus, as described by Dr. Lee;—the distinctions in the appearance of the thigh, consequent on those different sources of inflamed and obstrueted vein. Then you should take into consideration the inflamed and swollen arm in cancer mammæ, and inquire how far it is connected with this discussion. See, then, how these subjects hang together, and it is remarkable that you have had, or may have had, opportunities of making observations on all of them in the wards or dead-house of the hospital within a very short period.

ON DENTITION;

WITH AN

ATTEMPT TO EXHIBIT THE OCCASIONAL PRESENCE OF CERTAIN DISEASED CONDITIONS OF THE BODY,

As connected with its Irregular States.

By Dr. Ashburner.

[Continued from page 353.]

We have been considering the conditions that belong to a train of disease. Whatever may be the names which nosologists assign to parts of this train, the lowest grade is a discomfort—a start and a flush. Many symptoms intervene; the extreme is the convulsion, the termination of which is stiffness, or coma, and death. Cerebral irritation is manifested by the discomfort; and its *degrees*, as well as those of its manifestations, vary.

A disorder of the mucous surfaces of the alimentary canal is a form in which cerebral irritation sometimes manifests itself. Without apparent cause the stomach very suddenly voids its contents, and a flush of countenance, with very contracted pupil, and sudden acute headache, may supervene; perhaps not in every case. Frequent deep sighs; this state may not last long. A diarrhœa comes on; the stools are slimy. Now the remittent fever, with drowsiness, accelerated pulse, and all its other tokens, is present. If the child be of the weaning age when this cerebral irritation first manifests itself, the complaint is attributed to the ingesta solely; and it is said that they act by irritating the digestive organs, and inducing "a morbid state of liver."

How do they do this? We have no chain of events shewing the mode in which the ingesta may be a cause operating to produce a diseased liver in these eases. The liver may be found diseased after death, so may other organs; and most often so are other organs. But the liability to disease is first established in the system; and how is it established? Not immediately by the ingesta; for if this were so, every child brought up by hand should have the bowel complaint and the remittent fever. I have seen children brought up by hand that have never sucked their mothers, in whom the vigour of constitution was such, that notwithstanding many unfavourable circumstances, the developments were very nearly normal, and no serious disease supervened during the whole progress of dentition. I have invariably witnessed some unpleasant circumstanee relating to the power of digestion of the infant during the course of an anormal dentition. One great practical benefit of the observations on the progress of development that I am endeavouring to communicate, arises from the distinction between subjeets that are prone to be easily disturbed in the performanee of their digestive funetions, and those who, being of more

healthy configurations, carry on digestion more steadily.

As a general rule it may be observed through life, that individuals who suffer from anormalities of dentition, and more especially those who mingle the developments of one septenary period with those of another, are persons who more or less, or sooner or later, according to the *degree* or the *period* of entanglement, feel the evil consequences resulting from imperfect power of digestion; and they are the persons who are most liable to epidemics, and most obnoxious to the influence of those circumstances which are known to entail disease.

This general proposition has so often struck me in attending to the diseases of children, that I have been surprised to find it so much neglected in regarding the ailments of adult life.

The inference is not to be drawn, it is hoped, that improper food is beneficial to those children that are vigorously circumstanced by the enjoyment of a normal configuration. There are people who insist upon giving unnatural food to children long before their stomachs are prepared for any other description of aliment than that which the Almighty has furnished for the more tender period of infancy in the breasts of their mothers. Had the beneficent Being that formed us intended that pap and other poisonous compounds should constitute the food of infants, there is no doubt he would have supplied it ready made in the parental mamma. The desire to improve upon nature by silly conceits is in this respect, as in the wearing of stays and other badly applied articles of dress, undoubtedly the cause of great anormalities in the progress of growth. An exception to a general proposition is no proof of its incorrectness. If a child thrives upon bad food, and if a woman retains her natural form after the applicatioe of twisting instruments worn as articles of dress, it can be said truly, that the constitutions of such individuals have been vigorous enough to withstand the evils inflicted upon them, not that those evils are the wisest arrangements they could adopt.

It is proposed then to refer the diarrhœa and atrophy which attack children about the weaning period of life, and which attack some sooner even than that time, not only to the improper ingesta that are crammed down the throats of infants by their mistaken nurses, but to a tendency that exists in the individual to have its digestion disturbed by the anormal progress of its developments. The atrophia ablactatorum, or weaning brash, so well described by my friend Dr. Cheyne, is, under this view, the disorder of the mucous surfaces of the alimentary canal, in which cerebral irritation sometimes manifests itself. It is by no means a disease confined to the weaning period of life; modified, often hardly at all, by circumstances, it occurs frequently in the progress of the second dentition. I have known the first four permanent molares cut, often without the child or its friends having been at all aware that the process was going on; but I have in other cases seen the diarrhœa, atrophy, and all the signs of the weaning brash present while they were coming through. I have sometimes seen this disease present when the bicuspid and canine teeth were presenting themselves anormally. In the class of constitutions in which the frame proceeds with rapidity in its growth, the individual being of a very nervous temperament, this atrophy and diarrhœa occasionally attend on hasty, precocious, or irregular second dentition. In most of such cases the liver is the organ commonly blamed, and it has been fashionable to administer mercury, in some of its forms, with the view of regulating the secretion of bile. Does mercury act upon no other organ than the liver? May it not possibly influence the liver through its operation upon the nerves? May it not, by the medium of the central part of the nervous system, so "*loosen the texture*" of other parts as to facilitate the progress of development? In cases of anormal development, failing in this result, may it not fail too in promoting a healthy secretion of bile, and in arresting the progress of the disease?

Mercury acts very curiously in affecting the mouth during the progress of dentition, and often very beneficially; but injudiciously administered in this diarrhœa, it may aggravate the irritation upon the mucous surface of the intestines.

A very interesting and beautiful young lady, of slight figure, but tall stature, with light hair, grey eyes, and a very delicate skin, nineteen years of age, had been for nearly six months subject to night perspirations; for which her medical attendants, turning their attention to no other point in the case,

had in vain prescribed sulphuric acid, Epsom salts, with infusion of roses, sulphate of iron, and acetate of lead. She received no benefit from this treatment; and as she became thinner, and had a hard dry cough, her mother took her into the country. She went into Kent, visited Dover, and remained out of town more than two months. Muttering, moaning, and starting during sleep, and grinding the teeth; picking her fingers almost all day, notwithstanding the soreness and pain she had induced, were indications of cerebral irritation in this case. The anxious mother, though her daughter was rather better on the whole, could not stay away from London, for the bowels became relaxed. On their return to town, the young lady complained of constant headache; relieved occasionally by six grains of calomel. First one physician was consulted; soon after another was added. The pulse, at first 96, small and wiry, rose in a few days to 120; her health becoming rapidly worse, her emaciation extreme. The motions were at first like spinach, then they were like light greenish clay, with slime, and at last watery, with undigested aliment: whatever she swallowed seemed to pass undigested. Her tongue, at first like raspberries and cream, a white ground with red spots upon it, became dark and loaded. The edges of her mouth were black, and she died comatose at the end of nearly seven weeks. Her medicines had consisted principally of chalk, Dover's powder, ipecacuanha, rhubarb, kino, preparations of mercury, &c. In the latter periods of her illness it was observed that mercury appeared to aggravate the bowel complaint. On examination of the body the head was not opened. The lungs were partially hepatized, and there were a few small tubercles. A small quantity of fluid in the pleural cavities, and some in the pericardium. Pleura costalis and pulmonalis adherent for a small space at the left side. Liver small; gall-bladder empty. Inner surface of stomach sodden and soft. A patch of denuded surface of the size of a sixpence near the cardiac orifice. Peritoneum of jejunum and ileum inflamed in patches. One portion of the gut, for about three inches, *intussuscepted*. Ulceration in patches about the agminated glands. A few mesenteric glands hard; some large, containing cephalomatous matter. Caput cæcum thrust up near the stomach. Arch of colon contracted. In the mouth, the first molaris of the left side in the lower jaw was gone; the corresponding tooth on the right side was decayed. The teeth in the upper jaw were complete. The first molaris on each side had the blue colour that indicates incipient decay. The two upper wise teeth were through the gums, the lower had not protruded.

A fine healthy-looking child, the object of general admiration for its remarkable beauty, had been partly nourished from the breast of his mother and partly fed through the sucking-bottle, on a mixture of tops and bottoms with milk. He appeared to thrive well. At eight months of age, the two inferior central incisors were cut at the same time. A diarrhœa attended this development, and he was somewhat reduced in flesh. His mother became alarmed, and took him into the country, about thirteen miles from London. Three weeks after the appearance of the two teeth, the diarrhœa returned with aggravated symptoms. Drowsiness, moaning, starting, waking up to cry, to rub and pick the nose; an occasional expression of wonderfully increased intelligence; then a discontented, peevish look; extreme fretfulness; screams; breath faint, and offensive; thirst very great; skin hot and dry; evacuations watery, curdy, faint in odour, very frequent; aliment undigested. This state continued three weeks, not materially influenced for the better by the medicines that were administered, which consisted of chalk, calomel, laudanum, and starch clysters. The parents of the child had the advice of some of the most distinguished and talented medical men in London. It was observed that calomel aggravated the diarrhœa, and the infant was generally worse after its exhibition. Mercury, with chalk, did not produce more favourable results. Anasarca came on, and in six days after the first appearance of œdema the child died.

During seven days, this infant had cut four superior incisor, two lateral inferior incisor teeth, one superior and one inferior molaris of the right side, and the capsules of those on the left side were advanced.

In this atrophy, with diarrhœa, coincident with dentition, the digestive func-

tions are for the most part so seriously impaired, that whatever is retained without being vomited passes speedily through the alimentary canal, unaltered in character: potatoes especially, and most vegetable materials, go through unchanged. The fever accompanying the disease is the same which has been described by Dr. Butter, as the low infantile remittent fever, though it is modified by circumstances. It varies much in its energy, and sometimes has a close analogy in symptoms to the severer forms of typhus, but generally it lasts much longer. There is an erroneous course of development: if evolution be favoured by circumstances, the patient recovers. A little girl, eleven years of age, had shed her incisor and canine teeth; the four deciduous molares were persistent and firm in her lower jaw. She had lost the first deciduous molaris of the right side in the upper jaw, and it had been replaced by a bicuspid tooth. The bicuspid on the other side had come through a wrong part of the roof of the mouth, while the molares, which ought to have loosened, were in their original places. Her canine teeth projected forward. There was no room behind for four more teeth. The errors of health in this girl consisted at first of a roughness all over her skin. She had cough, and her mother remarked that the child had had the same kind of cough in cutting each tooth while an infant. She sucked her thumb all night in bed, and occasionally moaned, muttered, and started in her sleep; dreamed a good deal, and sometimes awoke crying and screaming. The father had tried to cure the child of sucking her thumb by the adoption of various expedients. On one occasion he tied her two arms down to her side after she had fallen asleep: a convulsive fit ensued, which lasted nearly two hours; and since that, no attempt had been made to break the habit.

For about a week, the girl had had a relaxed state of bowels, attended with rapid emaciation; six or seven green slimy motions in a day. Breath very offensive; pulse 110, wiry; tongue raspberry and cream; great thirst; no pain about the stomach. Calomel, six grains. Three deciduous molares of the upper jaw removed. Next day (October 8, 1832) three dark motions; last very slimy, with forcing pain. Chalk mixture; two drachms of comp. tinct. of camphor; aromatic confection, to be taken. At night, rhubarb, ten grains; syrup of ginger, two drachms; cinnamon water, fourteen drachms.

9th.—The rhubarb operated at four. Forcing pains. Two other motions, of light clay colour. Four molares of lower jaw extracted; fangs of the anterior teeth beginning to be absorbed. Calomel, three grains, and extract of opium, one grain, were prescribed; but the girl feeling quite well, the medicine was omitted.

A girl, aged twenty-one, a servant-of-all-work, was obliged to leave her place in consequence of a bowel complaint, for which she had in vain swallowed doctors' stuff. She applied one morning to me: it was with difficulty she could be brought to my house, so weak and emaciated had she become in the space of four weeks. Her countenance was pale and anxious. She had sandy brown hair, and grey eyes. There were a great number of small warts on her forehead, and a few on her hands. Her face was uncommonly greasy, and had numerous small clogged sebaceous follicles about it. The tongue was a marked example of the raspberry and cream character, so common in cases where the teeth are developing. In the upper jaw this girl had all her teeth perfect; in the lower jaw there was *overlapping of incisors*. The first bicuspid on each side was pushed into the mouth, towards the tongue. She had been obliged to have the first molaris on the left side removed about six weeks before, from its having been decayed and painful. The corresponding molaris on the other side was quite decayed. The spaces for the two *dentes sapientiæ* were abundantly large, but covered by dense cartilaginous substance, through which the teeth could not issue. I removed portions of this chondroma, and prescribed of rhubarb one scruple, sulphate of potass two scruples, tartarized antimony one grain, compound powder of cinnamon, six grains, and desired the mother to let me know how her daughter was the next day. She did not come; but two months afterwards she wanted advice for herself, and I had the gratification of learning that the daughter got quite well a few days after I saw her, and was now in place again.

Dr. Butter, describing the infantile remittent fever (p. 13), says, the "belly is on the extreme, being either costive

or loose." He had no idea that he was describing the same diseased condition of body as that to which Dr. Cheyne has affixed the title of *atrophia ablactatorum;* which, in fact, is but an aggravated *degree* of a *symptom* of the developmental disorder.

It has been remarked that cerebral irritation manifests itself by a disorder of the mucous surface of the intestines. Is diarrhœa to be considered as the only manifestation of a disordered mucous surface? May not the absence of a healthy degree of sensibility to the impressions of the substances which come in contact with it, be considered quite as much a disordered condition as that in which too keen a degree of sensibility characterizes this texture? Very often the bowels are costive, and though this is not so inconvenient as a state of diarrhœa, it cannot be said to constitute a healthy condition of the canal. When the degree of ailment is not at first very striking—when an anormal development is attended by starting, moaning, and muttering in sleep, and a costive state of bowels, an occasional flush, an occasional sick headache—if no other symptom be present, very little is thought of the disorder. The costiveness becomes a habit. It is not a habit of perfect health; yet how common is the observation that such a person is very healthy and strong—his *habit* is costive: and then, among some, follows the inference that a costive habit is the cause of strength;—and if the individual was an example of anormally developed structure, he might be adduced as a convincing proof of the fallacy of any general proposition which assumed that normal health and anormal dentition were incompatible events. To argue in a controversial spirit is not the purpose of the present observations. Objections cannot be made to correct statements. The position adduced may not be clearly or explicitly stated, and objectors may not understand what is meant; and hence misapprehensions occur. There is a proneness in some individuals to prefer a mistaken view to a correct one. *Perfect health* surely is not a state in which any circumstance in the frame produces a *tendency* to either an acute or a chronic disease. This *tendency* must accompany costiveness. When a constipated state of bowels is present, with the signs of the developmental disorder, several unfavourable events are apt to supervene: the mucous surface of a costive bowel can be irritated, and can propagate the irritation to the brain, as well as the inner membrane of a relaxed bowel; but the result must be as different as the conditions. The mucous surface of the intestines is but a part of the dermoid system. The mucous surfaces in other parts of the body belong to the same system, and the influence of these parts upon the nervous system varies according to the condition in which they may be. Thus if, during a costive state of the bowels, the wise teeth are cutting anormally, a delirium may occur, carrying off the phrensied patient in seven days. On examination of the body, the remarkable healthy state of all the organs except one, the inflamed mucous surface of the bladder, and consequent thickening of its muscular tunics, might be striking. Could such a case occur in a very relaxed state of the bowels? Constipation, coincident with an anormal state of the development of any organ, is surely to be guarded against. A gentleman, twenty-seven years of age, was occasionally affected with tic douloureux of the left cheek and eye-lid. He applied to me to know what were the best means of avoiding the habit of constipation; for he had observed, that during the last five years he had always been relieved from pain when he took calomel and colocynth, and got a complete clearance of his bowels; but he could not, he said, be always taking calomel, and had therefore tried rhubarb and lenitive electuary, and senna with prunes, and salts and castor oil: but to be obliged to be always taking medicine was a great evil. The apparatus for enema was not effectual in his case; it had no satisfactory result; it did him no good. I asked him if he were aware that one side of his face was developed in a very undue proportion to the other? To his knowledge, nobody had remarked it. In looking into the mouth, I found the wise teeth of the upper and lower jaw completely through on the right side; on the left, one tubercle was peeping through the gum in the upper jaw, and in the lower there was a swollen gum, but the tooth was not through. I remarked, that in all probability liberating the teeth by means of the gum lancet would render the use of medicine unnecessary; but as

he felt very sceptical upon what he seemed to think a novel idea, he would not submit. I gave him a prescription for equal parts of the extracts of rhubarb and jalap, which I have found a good habitual eccoprotic, and told him to take every night as many pills as he found, from experience, necessary to keep the bowels open; remarking to him, in order to meet his prejudice against habitual medicine, that I thought vegetable extracts, which acted gently upon the bowels daily, in cases of constipation, with irregular development of some part of the frame, were as little prejudicial, provided they did not produce piles, or other injurious condition of bowels, as any other form of vegetable matter, which some folks thought it a duty to take at dinner, for the purpose of keeping the bowels regular. Under this view, I warned him against colocynth, aloes, gamboge, Morison's and other quack pills, which, habitually taken, are so apt to induce the most inconvenient forms of piles, fistulæ, and contracted gut. Living so artificially as we do in society, it is curious that more minute distinctions regarding the influence of medicines upon particular parts of the alimentary canal, have not been popularly established, and that more strict investigation has not been made into the conditions under which the milder forms of mercury become beneficial adjuncts to the gentle purgatives that are in common use in families. A little more extended information given to the public on these subjects, would destroy the greater part of the mischief they entail upon themselves by the ignorant patronage they afford to the vendors of drastic purgative pills. The subject of costiveness, and of regular peristaltic action, is intimately linked with that of anormal development of the teeth and jaws; and the numerous diseases that may be traced to a sluggish state of the alimentary canal produced into a habit, though first generated by anormal growth, form a very curious subject of inquiry. Children who are the subjects of convulsions, or who are prone to any of the symptoms of the developmental disorder, or to any degrees, not absolutely trivial, of those symptoms, are, for the most part, liable to a confined state of bowels. The growth being anormal, if a costive condition of alimentary canal be an accompaniment of such error, a habit is acquired; the mucous membrane is not duly influenced by the contact of the ingesta, and a healthy consentaneous *normal* peristaltic train of action does not take place in the gut. The individual retains a costive habit for life, perhaps. How much of the healthy state of liver, and the quantity and colour of the secretion of bile, depend upon a healthy state of the intestines, is a question not sufficiently investigated. In medicine, it is not always easy to establish the words which ought to follow *propter*, but we may be assured that observation leads to the conclusion, that where costiveness is *coincident* with anormal dentition, the secretion of bile is very apt to be in one of two different conditions—that of deficiency, with clay or greenish colour, or that of redundancy, with dark colour. In either case, magazines of dark bile may be found hoarded in the gall-bladder, hepatic, and even in the smaller biliary ducts, unless a sufficient quantity of mercury has been given to remove these lodgments.

It is not in children alone that convulsions happen in coincidence with anormal dentition and costiveness. Tic may be considered to be nearly allied to spasms. Spasm of the part affected with the pain not unfrequently accompanies the disease, and both are often removed by unloading the mucous sufaces of the bowels of their irritating contents. The disease recurs. There is surely some other circumstance productive of its presence, for sometimes the aperient medicines, even in the same individual, do not remove the complaint. We are considering anormal dentition and its concomitants. If anormal dentition be present in such a case, the ingenuity of the medical attendant should be exerted to discover the precise anormality in the train of growth, and if it be curable, it ought to be put into a train of regulation. But very often, when we discover the precise anormality, we are at a loss to know how to obviate its tendencies;—how to put the individual into a condition to promote the growth which is proceeding.

A man, twenty-two years of age, by trade a shoemaker, above the middle height, with brown hair and grey eyes, waxy and greasy countenance, bilious conjunctiva, applied to me for advice, suffering, as he was, from pains on the left

side of his face, which were sometimes attended by spasmodic twitchings, that invariably aggravated his tic douloureux. He was of a very costive habit of body, and could easily go a week without visiting the water-closet; nor was he aware that he was at all worse for being a few days without a stool. The complaint was whimsical; sometimes it came on severely, and then it left him for a fortnight or three weeks; then it would visit him slightly; then it would go off again, and he never knew when he was to have a slight or a severe attack of pain and twitching. He could not find out if any particular kind of weather made him better or worse. In speaking, he stammered very much; and he said he knew of no circumstance to account for his impediment. About two years before, he had suddenly become very nervous, and he then began to perspire profusely at night. His night-sweats still continued, but they were not near so bad as they used to be. When his nervousness came on first, he began to stammer, and he was sometimes so confused for a word, that it seemed as if he had been stunned, and had forgotten every thing. In his sleep he often started and moaned. This had been remarked by others, or he would have known nothing of it himself. He was very subject to cold in the head, and coughs. The pulse was seventy-two, wiry, and quick in beat; the tongue was loaded at the back part with a yellow crust; the jaws were small, and he had only twenty-eight teeth; the four last molares were wanting: the spaces for them were very small. In the upper jaw the tubercles were prominent, behind the second molares; in the lower jaw there was not room for the *dentes sapientiæ*. The first molar teeth had each specks in them, and were of a more blue tint than the others. With a conviction on my mind that this man was suffering from a retarded and an obstructed development, I knew not how to afford him relief. If that part of each jaw which contained the germs of the wise teeth could grow faster, there would be room for the teeth to come through; but how was the tendency to growth to be given to him? Going into the country, where a pure air would invigorate him, and make him expand his frame, was out of the question. To give him iron, bark, and other corroborants, in town, would do little good, but, combined with an eccoprotic and alterative course, it was the only plan left; for, to remove the four healthy teeth, which prevented the egress of the wise teeth, was an unwarrantable experiment. First, he was advised to take alterative doses of blue pill, with extract of colocynth. This cleared his tongue a good deal, and I thought made him stammer less; but he assured me that the stammering varied a good deal: sometimes it was better, sometimes worse. Every morning he was enjoined to take a solution of the sulphates of potash, soda, and magnesia, in a large quantity of water; and an hour before dinner, regularly, two grains of sulphate of quinine and one of ipecacuanha; porter at dinner, and Dantzic spruce at bed-time. This man came backwards and forwards to me for several months. I varied his medicine: I gave him colchicum with rhubarb; directed him to sponge his body with warm vinegar. Nothing relieved him; and I lost sight of him for fifteen months. He had been in the neighbourhood of Birmingham, with some relations: he had gained flesh and looked more healthy, and had lost the tic and the twitchings. The jaw had increased, and he had cut the upper wisdom teeth, but the lower were not through: there was still too small a space. He had suffered much from decayed teeth, and had had three drawn, and there were four decayed teeth and a stump still remaining. The pressure from behind, in the lower jaw, had wrought a remarkable change in the incisor teeth. When I first saw them, they were even; now they were huddled together, and lapped over one another.

I proposed to this man, by way of curing the habit of stammering, that he should lose the remainder of his decayed teeth, and have the gums over the new-coming wise teeth freely scored. He would not take my advice, and I saw no more of him. Nature had in this case made greater havoc with the teeth than I should have done, had I not regarded the removal of four healthy teeth as an experiment I had no right to make.

What is the process that usually induces decay of the teeth? The first step is the pressure in the progress of growth upon the fangs of the teeth. This is, occasionally, so great, that the fangs are directed from behind forwards, or very much bent outwards, and compressed together. Sometimes an oblite-

ration of the canal, which admits of the passage of the nerve and blood-vessels of the pulp, takes place; but even without this obliteration, the continued pressure of growth is sufficient to produce a disease of the pulp. This part having once suffered irreparable injury, the tooth dies, excepting, perhaps, that part of it which retains some vitality from the nourishment afforded to it through the medium of the membrane which some call the *dental periosteum.* When the crown of the tooth dies, its colour changes. A spot, perhaps, is found in some part of its external surface, which is apt to extend itself; but even if it should not, the enamel is so brittle that it breaks down like glass, and exposes the remains of the pulp denuded of its ivory, which suffers before the enamel had become so brittle. There are several diseases which affect the internal structure of the tooth; some attended by considerable inflammation and pain, others by a mere wasting of substance. The causes productive of the various diseases, regarded distinct from each other, should occupy the attention of the dentist: our object at present is, to trace merely the influence of growth upon these organs when that growth is anormal, and to show that decay of the teeth, as it is called, is a process resulting from a law of development operating in anormal trains. Sometimes there is great disproportion between the size of the teeth and that of the jaws, the teeth being much larger than they should be for the space allowed for their occupation. Hence, in the course of years, a continued pressure is apt to produce the diminution in size, or the obliteration of the nerve and blood-vessels. I have seen the second large molaris, influenced by some law the direction of which has yet to be investigated, so much jammed by the growth of the wise tooth behind it in a girl of fifteen, that one fang and its nerve and blood-vessels were unusually developed towards the outer part of the jaw, while two fangs, situated posteriorly, were compressed into one, their points directed forwards, and their cavities, as well as the nerves and blood-vessels passing through them, were nearly obliterated. These organizations, in order to understand their changes, should be regarded in reference to the slowness of their progress. The nisus of growth rushes to a portion, perhaps, only of the jaw; a deposition of bone takes place between two fangs: this may widen their distance from each other. If, on the other hand, a determination exists to form an increase or deposition of hard jaw-bone of an unusual size behind the tooth or on its internal side, the operation of this growth is a continued pressure, in some cases for years, and the result is a curvature forwards or outwards of the fangs of the tooth. In such cases, the fangs are compressed together. Sometimes the change, coincident with the development of a wise tooth, proceeds without much addition to the growth of the jaw. A wise tooth is sometimes lodged in the coronoid process of the lower jaw. It is developed there often without much increase in the size of the jaw, and I have in one case seen the two inferior wise teeth grow in a direction almost perfectly horizontal.

In some cases, the vigour of the organs formative of the tooth is more than proportionate to the vigour of growth of the jaw, and the result is that the fangs, spreading more extensively than they should do, compress the maxillary nerve, and inconvenience follows, according to the degree or extent of irritation produced. In cases where the full complement of the teeth is not perfect at the normal periods, there can be no doubt of frequent want of harmony; but with some a doubt may arise as to the existence of such a state where all the teeth have been cut. Whether the fang of the tooth grows, or the bony structure of the jaw suffers diminution by a gradual morbid contraction, the result is the same.

The teeth, especially the incisors and bicuspids, become huddled together, and an overlapping in front of the mouth takes place, one tooth riding upon another; and this disordered growth is always attended with some constitutional inconvenience. It is true the inconvenience may, in some individuals, be of a trifling nature, but in others it may extend to a very serious disturbance of functions. The *degree* of inconvenience varies according to the susceptibility of the party. The feelings of some persons are much more keen than those of others, and it is occasionally found that the depressing passions in such cases are attended by pain or other physical inconvenience.

[To be continued.]

NORMAL ERUPTION OF THE TEETH.

To the Editor of the Medical Gazette.

Sir,

I hope that no impression exists on Mr. John Hunter's mind that, while he was an anonymous correspondent, the remarks I felt at liberty to make were wanting in courtesy. I had expressly stated my feeling of the favourable manner in which he had noticed my essay. I find I am misunderstood by your correspondent, and I owe it to him, as well as to others perhaps of your readers, to make myself intelligible; and I trust that, as I mean not to be offensive, my explanations will be kindly received. There are many I do not hope to convince by all the facts I can adduce. The pains I take to argue with Mr. Hunter, is an evidence that I do not class him in the number of those wanting minds for scientific research.

It is quite clear, that unless two persons who differ can agree upon the use of terms, there can be no prospect of adjusting their differences. Mr. Hunter and I differ on the standard of health. He says his observations are "not limited, as the Doctor would infer, to unhealthy children." I have not the note with me, but I rather think my expression was, that your correspondent's "sphere of observation" was not "generally among *perfectly healthy* children." Mr. Hunter will acknowledge the importance of a close adherence to terms, when I tell him that I affirm, that neither he nor I have many opportunities of witnessing *perfectly healthy children.*" London and large towns do not frequently afford them; consequently our sphere of observation as to the *normal* progress of growth must be very limited, if we confine ourselves to the noticing of children in London. Since Mr. Hunter's "last letter, he has looked into the mouths of various children," and has not met with a "single instance to the contrary" of his proposition. Now, sir, "strange to say," I, writing to you at the distance of 120 miles from London, saw a child half an hour ago which has, according to my view, very nearly *normally* cut sixteen teeth, the last of which was the upper canine of the left side. The mother and nurses have been remarking to me how curiously the teeth have come through, almost exactly in couples, beginning *always* in the *lower jaw*, and then the corresponding couple coming through in the upper. The disturbance of system has, in this case, consisted of an arrest in the secretion of bile; the motions have been like pipe clay; they have become yellow again when the teeth have been through the gums. The meaning of Mr. Hunter's confession, that he is "ignorant of the meaning" of "the term *normal*," is plainly that he misunderstands me. It is not that he and I differ, only that I take "the ordinary course of nature" to be more often out of London than in the city. I will allow that Sir Richard's Croft's table may give the more usual train among London children, in those cases in which any thing like a regular train of irregularity may be observed. The appearance of the upper lateral incisors before the lower is very common, and is generally a precursor of continued anormal eruption—not always. At one time I observed so many cases of irregular development, that I made up my mind—not that there was a normal development at variance with all anatomical analogy—but that the writers on dentition could not have examined this part of their subject with sufficient minuteness. Further and deeper reflection induced me to believe myself mistaken; and I found reason to coincide in the justice of the remarks of Serres upon this matter, concluding that the epoch of the appearance of the cuspidati was the only point incorrectly stated in most of the books.

A very common train of eruption is the appearance of the first molaris in the upper jaw of the right side, and then that of the lower jaw of the same side, preceding the eruption of the corresponding teeth of the other side. I have often seen cases in which the first molares have appeared in the upper jaw, after the superior lateral incisors, before the lateral incisors have come through in the lower. It will be observed that these are instances of variation from Sir Richard Croft's train. What can be the reason of these numerous irregularities? What can determine "the precedence of development more frequently in the upper than in the lower jaw," when it is obviously opposed not only to all *rule* from analogy, but, as I affirm,

from the experience of not a few years, to all *rule* among perfectly healthy subjects? Are we to blink such questions, and hastily determine that, because Sir Richard Croft's order of eruption of the first dentition is in certain situations the more frequent one, *therefore* the great *majority* of the *race* must be bound by it—*therefore* it is the *normal* train? Are we not to inquire into the circumstances determining the divergence from all regular series in any set of phenomena we may observe? Has my good friend Mr. Hunter reflected upon the frequent differences that occur, in towns more especially, between the rapidity of growth in the jaws and that in the teeth? I ask, can individuals offering developments at variance with anatomical norma, be in health? As long as a man can go about and avoid his doctor, he is to all intents and purposes in good health! Perhaps that is all we, as doctors, have to trouble our heads about! Our observations on the slight deviations from comfortable sensations lead to the formation of theories, and those, with many a *practical* man, accustomed to the worship of a certain class of persons called patients, are abominations; but I am sure from Mr. Hunter's clear style of writing, that he has too good a head to despise philosophy, although it may appear under the nickname of theory; and disliking controversy as much as he can, both from the trouble it gives and the feeling it excites, I assure you that, but for the expected reward of his good opinion, I should not now have encroached so much on your columns to clear up my meaning.—I am, sir,

Your obedient servant,

JOHN ASHBURNER.

16th December, 1833.

ON VARICELLA.

(Communicated by SIR JAMES M'GRIGOR.)

To the Editor of the Medical Gazette.

Cape of Good Hope, March 20, 1833.

SIR,

BEFORE the beginning of the 17th century, small-pox and chicken-pox were regarded as varieties, or modifications, of the same disease; but since that time, medical men have generally felt convinced that they had sufficient reason for considering them as specifically different from each other. Some years ago, however, Dr. Thomson, of Edinburgh, revived the idea of their identity, with strong reasoning in support of it, since which time the profession have been examining evidence upon the subject, but without having as yet decided the question, although it is one of very great moment.

It appears to me that some positive evidence is to be obtained in this colony regarding it, as a disease which we call *varicella* is well known here, and occurs frequently.

In November last, alarm was excited by the report that a case of small-pox had appeared at Simon's-Town, which arose from a doubt having been expressed by the medical officer there of the nature of the eruption during the first two days. I rode down to see it, when, on a careful examination of the appearance and progress of the symptoms along with the attending surgeon, we pronounced the disease to be varicella, and not variola.

The eruption was said to have appeared three days before, and it was then confluent on the face and scalp, which were covered as with a mask of dark brown crust; and on the other parts of the body the pocks were very numerous, and in many places coherent. The patient was a black man, about 30 years of age, who had undergone successful vaccination some 14 or 16 years previously; and his present disease could not be traced to the contagion either of varicella or variola. He stated that he had a good deal of fever before the eruption came out, which had now subsided, and that his skin had been, and still continued to be, very itchy. On a minute examination of such of the pocks as were distinct, we found that they were of different shapes and sizes; that they were soft to the feel, flat in appearance, vesicular, unilocular, and without any central depression: most of those upon the face were already broken and crusted, and several of those upon the upper part of the body had also passed their *acmé*, and were in the same state. It was from their vesicular character, and the rapid progress of the pocks, and from small-pox being unknown to exist in the colony, that we pronounced this case to be one of varicella.

I heard of no other cases occurring at Simon's-Town after the one above mentioned, but it elicited the information

that several instances of chicken-pox had been seen at Cape-Town about the same time; and, in the month of December, it became epidemic about Cape-Town, when I had an opportunity of observing a number of the cases; but certainly none occurred during its visitation that I saw or heard of, which answered to the description, given by systematic writers, of small-pox.

In December my own three children became attacked with the prevailing disease, in a moderate degree; and the following are the notes of their cases, which I took daily at the time.

The youngest, aged 2 years and 8 months, had been twice vaccinated, first at 3 months, and again at 18 months old; when, both times, the pustules went through the regular course locally, and the second time it was particularly observed that she had strong constitutional fever on the evening of the 9th day.

On the 12th December, 1832, (first day of the eruption,) small orbicular red spots, like flea-bites, appeared upon her neck, which had not been preceded by, nor were they attended with, any perceptible fever.

13th (2d day.)—The spots perceived yesterday have enlarged in every way, and have become vesicular,—each containing a small quantity of clear lymphy fluid at the top; they feel like flat seeds superficially seated in the skin; and several new ones have come out on the scalp: there are none visible on the face, trunk, or extremities; and there does not appear to be any attending constitutional excitement.

14th (3d day.)—The original pocks on the neck are now full of a thickish straw-coloured fluid: they are still flattish in appearance, and now feel soft, and they have a slight degree of inflammation around them, but their base is not hard, and the inflammation is only just close to their border: they are of different sizes and shapes. The number of vesicles on the scalp have increased, and are gradually enlarging: I can now count twenty, which are mostly of a round form, but none have come out on any other part of the body, and there is no fever.

15th (4th day.)—To-day a few red spots have appeared in the forehead, face, chest, and upper part of the back, and it is to be observed that they are attended with an itchy irritation. The original pocks on the neck have become broken, apparently from rubbing or scratching, and are scabbing;—one of them looks very fretful, evidently from having been scratched: those in the scalp have increased in number, and many of them are elevated, round, and pustular, and have, to the best of my recollection and opinion, the appearance of variolous pustules, being of the size and shape of half a large pea, with a covering of firm skin, and an indentation in the centre. No fever.

16th (5th day.)—Five very minute red spots are observed upon the hand and forearm; six or seven are also to be distinguished upon the feet and legs; but there are none upon the upper arms or thighs. The pocks on the scalp continue firm and unbroken, and are of a yellow colour: those on the face and body are enlarging, and are of different shapes and sizes; some are globular, and others oblong. There is still great itchiness of the skin: no fever.

17th, (6th day.)—The little patient was restless, fretful, and rather feverish, during the night; and some of the glands of the neck are found to be enlarged. A few fresh spots have appeared on different parts since yesterday: there are now some upon the upper arms and thighs. The places of the original three pocks in the neck are still inflamed, and have matter under their scabs, which have not yet fallen off. Some of the pocks in the scalp appear to have broken, and are forming thick brown crusts, but most of them are still full of thick yellow matter: those on the face, back, and chest, seem at their acmé, and are full of straw-coloured lymphy fluid; but there is no swelling of the face, nor of the interstitial skin around the pocks; and, excepting one on the forehead, none are so large as those on the scalp. This one upon the forehead is very distinctly indented in the middle, and three or four others on the forehead and back have also this appearance well marked; but the greater number have no central indentation. The pocks which have this mark are all round, and seem firmer and feel harder than the others; but this mark does not appear to be connected with the *size* of the pocks, nor are those with it attended with any more surrounding inflammation in the skin, than the others which are without it. There is no regular areola around any of them, like what is found in vaccine pustules when at their acmé.

It is nearly 30 years since I have seen a case of what I considered regular variola, and cannot therefore speak positively from observation as to the exact resemblance of any of the pocks in this case to those of small-pox; but I think several of them come very near to the character of the variolous eruption, as far as I can recollect, or can judge from plates and description.

18th, (7th day.)—Unexpectedly a great many of the pocks on different parts of the body, especially on the scalp and forehead,

retain much the same appearance as yesterday, and do not begin to break, shrivel, or scab: there is more feverishness to-day, with sickness at stomach; pulse quick; skin hot; tongue white; no appetite. In the morning a purgative was given, and in the forenoon an emetic, which mitigated the symptoms. Two new spots appeared to-day on the neck.

19th (8th day.)—The little patient continued hot and restless during the night, but the fever seems now gone. The places of the first pocks are less inflamed; some of the oldest pocks on the scalp and forehead that were indented have black spots in their centre, and begin to sink and shrivel a little, while others continue yellow and full: I should call these pocks on the scalp regular *pustules*, and two or three others about the forehead certainly deserve this title also, from their round form, firm texture, and the purulent appearance of their contents; but the most general character of the pocks is that of thin, soft, unilocular vesicles, containing thickish yellow serum. Some of the pocks on the face, neck, body, and extremities, are not larger than pin's heads; many of which are like the large ones in miniature, but others appear simply inflamed spots, containing no fluid.

20th (9th day.)—No fever; there is still some inflammation in the site of the original pocks on the neck; many of those on the scalp continue stationary, while others have scabbed; some of those on the forehead are covered with dark-brown solid scabs, like those of vaccina, but are not quite so thick; and, with the exception of some of the pocks on the scalp, the eruption is now generally declining rapidly, and many of the *inflamed spots* which came out last seem to be disappearing, without forming any crusts or scabs.

21st (10th day.)—The scabbing process is nearly completed in every part, and where the pocks have not been rubbed many of the scabs are solid, as if they would fall off in one round flat piece, and of a smaller size than the circumference of the pocks.

22d (11th day.)—All inflammatory appearance of the skin has subsided, and the scabs are falling off, except on the scalp, where they still adhere.

23d (12th day.)—Most of the scabs on the scalp continue adhering; two of the pocks on the forehead, which resembled variolous pustules, have left deep pits in the skin, which will be permanent.

24th (13th day.)—A great many of the scabs still remain on the scalp, probably owing to the firmer texture of the integuments of that part; but the course of the disease may be considered to be concluded.

January 1st, 1833 (21st day.)—Some of the scabs on the scalp did not come off till to-day.

[Both the other children had the disease in a similar form.]

Such was the appearance and progress of this disease in my children. I did not observe it quite so minutely in other cases, but I believe that it generally exhibited nearly the same character. I did not hear or see of any case at this time, in Cape Town, attended with symptoms of much greater severity, either in regard to the attending fever or to the extent of the eruption; but some were milder: nor did I hear of any one in whom the disease was considered to be attended with the least danger. I am not aware of the disease having been seen in any person who had not undergone vaccination (all children in Cape Town being vaccinated at a very early age); but no idea was entertained by the profession, or by the public, of its being small-pox. It is well known in this colony, and is constantly occurring sporadically, and not unfrequently epidemically; but if I except the aforementioned instance at Simon's Town, I have never heard of its ever having appeared in the colony with characters more resembling small-pox than those I have stated in the cases of my own children, or with a degree of severity to excite alarm for the life of the patient, or any appearance of its being small-pox.

John Murray, M.D.

MORBID MODIFICATION OF THE VACCINE VIRUS.

To the Editor of the Medical Gazette.

Sir,

Will you oblige me by giving publicity to the following fact, through the medium of your valuable journal? I make this request from the conviction that it may convey a useful hint to some medical practitioners.

Five children were recently vaccinated from the arm of a healthy child, which had been vaccinated about a week previously. Each of these children became the subject of much constitutional disturbance almost immediately; their arms were enormously swollen and œde-

matous; one child had convulsions; in two of them abscesses formed; and in all there was an alarming degree of febrile excitement. Had these phenomena occurred in one or two children only out of the five, it might have been suspected that the fault was in them, the recipients, and not in the child from whom the virus was taken; but instead of this, five, the whole number vaccinated, were all similarly affected. It might be asked if the lancet which was used in vaccinating was clean. It so happened that three different lancets (all, I believe, clean) were used; and one case, which was at a distance from me, was effected by means of some of the ivory points which are commonly used for the purpose.

As I have already stated, the child from whom the virus was taken was healthy; but on the evening before I vaccinated from it, the mother had of her own accord applied a blister behind its ear, for some pain there, which was probably only a temporary effect of the irritation of the vaccine pustules. Notwithstanding the application of this blister, the pustules seemed perfect, and the lymph in a proper state for use, only perhaps a little more opaque than might have been expected. It appears, then, that a blister—for this I believe was the cause of the calamities I have detailed—it appears, I say, that a blister applied to an individual during the progression of the vaccine pustule, and in its vicinity, in some way renders the lymph of that pustule unfit for the propagation of the cow pock; for I should have observed, that not one of the five children alluded to had any thing like the vaccine pustule produced in them, from the very first.

The probable cause of all this was the absorption of some portion of the cantharides, by which means a violent inflammation was produced, which superseded the intended specific inflammation. It is not my purpose to theorize on the subject, but we may learn something from the facts. We may infer the extreme probability of any eruption or rash, however slight, especially if contiguous to the part vaccinated, affecting more or less the lymph of the vaccine pustule, so as to render it unfit for propagation. We cannot be too particular in the choice of a pustule for propagation; and we should do well to attend rigorously to Dr. Jenner's first directions on the subject—namely, as to the age of the pustule, the state of health of the person vaccinated from, and of the one vaccinated. Dr. Jenner laid great stress on these points. I am sure they have not been duly attended to; and their neglect has probably been influential, amongst other causes, in bringing the repute of the practice of vaccination so much into the shade as it has become of late. Vituperating a practice, however, which we have not enacted in an orthodox manner, or according to the directions of its illustrious discoverer, is like the conduct of the patient who upbraids his doctor for not curing his malady, when he has followed none of the prescriptions laid down for him.

I will not, sir, trespass longer on your time; my apology for having done so at all must be, my idea that the knowledge of the fact I have communicated might be useful, and my wish to contribute, in ever so small a ratio, to the restoration or improvement of a practice whose brilliant lustre has faded somewhat—which has, I believe, saved the lives of thousands—which has preserved the "human face divine" to thousands more—and which will, I trust, yet shed its benign influence practically over the world.—I remain, sir,

Your obedient servant,
CHARLES FLUDER.

Lymington, Hants, Dec. 11, 1833.

METHOD OF DISSECTING THE OTIC GANGLION.

To the Editor of the Medical Gazette.

SIR,

SHOULD the accompanying paper be thought worthy of insertion in the pages of the London Medical Gazette, in which the "Observations" which have given rise to it appeared, I should feel obliged by its early publication.

Your obedient servant,
JOHN THURNAM.

Westminster Dispensary,
9, Gerrard-street, Soho, Dec. 14, 1833.

In a number of the Gazette for August last there was a paper published by Professor Mayo, entitled "Physiological Observations," in which that anato-

mist states that, in two dissections which he had made with Mr. Partridge, for the purpose of examining the ganglion oticum described by Arnold, it "was not to be found." It was only in the previous month that the Edinburgh Medical and Surgical Journal contained a translation of Arnold's description of this ganglion, accompanied by a plate, by W. S. Tyler, Esq. of Devizes.

I felt considerable interest in this paper, for which I consider that those engaged in anatomical research, who are not acquainted with the German language, stand highly indebted to the gentleman who furnished it. Some thoughts of my own on the discovery, with an abridged description of the ganglion, were published in a contemporary journal, about the same time that Professor Mayo's "Observations" appeared in the Gazette. These latter occasioned me considerable disappointment, inasmuch as they rendered me—a tyro in anatomical study—obnoxious to the imputation of devoting time and attention to a part, the existence of which I had not ascertained, and which, indeed, is said not to exist.

At the time of writing my paper, I had made an attempt to discover the ganglion, but owing to the season of the year, and to the subject not being very recent, I was foiled. I determined, however, to investigate the subject fully by dissection; and during the last month I have examined the third division of the fifth nerve in three subjects, in all of which I have found the ganglion oticum; and two of the specimens I have by me. So far as I can judge from these investigations, it appears to me that, in order fully to expose the system of nerves of which this ganglion is the centre, it is necessary to have the part in as recent a state as possible. The dissection, the result of which is most satisfactory to me, was made on a subject two days after death; and even in this case I was unable to preserve all the nerves depicted by Arnold; to effect which I presume previous preparation by turpentine, alcohol, or some other chemical agent capable of hardening the nervous fibre, would be necessary. I conceive that the process adopted by Professor Mayo, of macerating the bone in dilute muriatic acid, is superfluous, at least so far as is necessary to expose the ganglion itself, and almost all its nerves.

The peculiar location of the ganglion would appear to be the cause of its having so long eluded the notice of the anatomist. I tried in vain to discover it whilst I was content to look for it under the foramen ovale in the *entire* skull, it being situated immediately under the foramen, and quite over-shelved by the projecting extremity of the eustachian tube and under surface of the petrous portion of the temporal bone. After sawing through the cranium, in the line of the additamentum suturæ lambdoidalis, and again through the larger wing of the sphenoid bone, in such a manner that the two lines intersect each other in the body of that bone, I have found it necessary to saw through the petrous process just internally to the cavity of the tympanum, and carefully to separate this from the larger wing, and with it of course the cartilaginous portion of the eustachian tube, as well as to remove so much of the sphenoid bone as is situated posteriorly and internally to the foramen. Thus is obtained a section of the foramen ovale, with a full view of the nerve descending from the gasserian ganglion, and on its internal surface having a small quantity of adipose tissue, by which the ganglion oticum is surrounded, and which, without great care, would inevitably be removed with it by the dissector.

It will afford me great pleasure to exhibit the preparations to any gentleman desirous of inspecting them. However, it is my intention to prepare another when I have the opportunity; previous to dissecting which I mean to harden the nerves by macerating the part in oil of turpentine, when I hope to have the ultimate distribution of the nerves still more complete.

OPERATION OF LITHOTRIPSY.

To the Editor of the Medical Gazette.

SIR,

SOME little time since I was in attendance with Baron Heurteloup when he performed the operation of lithotripsy upon a patient in this neighbourhood; and from the examination of his instruments I had a percussor made by Weiss, which I have lately used successfully in a patient in our infirmary. As the ope-

ration has, I believe, been hitherto performed only once or twice by any provincial surgeons, and is, I believe, one likely to prove an essential benefit to mankind, I transmit the case for the perusal of your readers.

I must be allowed to take this opportunity of thanking the Baron for the liberal manner in which he submitted his instruments to my examination.

Thomas Gracemark, æt. 69, admitted July 16, 1833, a healthy spare person; has had all the symptoms of calculus in the bladder for upwards of two years, and his sufferings have of late been extreme, not being able to retain the urine more than ten minutes at a time. The urine has a considerable lithic acid deposit, but not much mucus, and no offensive smell. I could not feel the stone by the sound on the first examination, owing to the projection forwards of the prostate, which was enlarged. At the next examination, however, I readily discovered a moderate-sized calculus, about the size of a large walnut, and seized and crushed it by a few strokes of a hammer on the percussor.

From the date of the first operation he experienced considerable relief to his symptoms; and after the second he used to walk away from the operating table with great unconcern, and often went directly to his dinner with the other patients. The calculus was entirely comminuted in ten manipulations, and he was discharged cured on the 1st of November. The steps of the operation have been so often described by Baron Heurteloup, in the details of his numerous cases, that the relation is unnecessary now, but a further explanation of one or two points is required.

The number of manipulations may appear extraordinary, considering the size of the calculus, but the projection inwards of the enlarged prostate was a considerable impediment to the seizing of the calculus after its size was reduced by the first crushing, and thus prevented the grasping and crushing of the fragments as readily as otherwise might have been done. Secondly, this same impediment hindered the escape of the fragments, so that portions which might have passed, had no such hindrance existed, lay still behind the projection, and required further comminution to allow of their escape.

The length of time occupied in the cure was occasioned by several delays, of a nature unconnected with the case, which prevented my following up the treatment.

The fragments were passed without difficulty by the natural efforts, and without the use of the evacuating sound, which was rendered ineffectual for that purpose by the projection of the prostate.

The last observation that I would make is, that the value of this operation is not duly estimated in the usual comparisons between it and lithotomy. Were the employment of it much more common, the public would be able to understand its value, so that many who, from fear of being cut, delay the application for relief too long, perhaps till all reasonable hope of success is passed, would now come in the early stage of the complaint, and without hesitation or fear submit to have the calculus crushed while yet the constitution has not much suffered. Indeed, I look with confidence to the time when, through the aid of this operation, calculus in the bladder will be but little more dreaded than the necessity for a dose of aperient medicine. At any rate, under existing circumstances, every surgeon must frequently meet with most distressing instances of the sufferings and fatal consequences induced by the great dread of so formidable an operation as lithotomy must be, even under the most skilful hands.—I am, sir,

Your obedient servant,

A. T. S. Dodd,

Surgeon to the Chichester Infirmary.

Chichester, Dec. 3, 1833.

THE LATE MURDER AT PLUMSTEAD.

PATHOLOGICAL AND CHEMICAL EVIDENCE.

To the Editor of the Medical Gazette.

Sir,

I beg leave to transmit to you my notes of the appearances observed on examining the body of the late Mr. Bodle, of Plumstead; and, with Mr. Marsh's permission, I subjoin a copy of that gentleman's experiments on the poisonous coffee, and on the fluid contents of the stomach. As the newspaper reports of the medical evidence are imperfect, we

have thought it right to put our memoranda on record in your valuable journal.

I am, sir,
Your obedient servant,
SAMUEL SOLLY.

St. Mary-Axe, Dec. 16, 1833.

POST-MORTEM APPEARANCES *of George Bodle, aged* 82.

The lining membrane of the fauces inflamed, and covered with an unusually large quantity of mucus. Inflammation extending down the pharynx and œsophagus, also to the lining membrane of the larynx; that of the trachea still more vascular, and of a darker red. Mucus in unnatural quantity, lining the bronchus and bronchia. The *lungs* congested, and, on being cut into, yielded a very large quantity of fluid, the result of bronchial inflammation.

Heart.—Slight but old adhesion of the pericardium. Ossific deposit round coronary arteries, also in aorta, &c.

Abdomen.—Stomach distended with flatus. Liver granulated—like a nutmeg when cut. Spleen small and soft; coat cartilaginous.

Interior of Stomach.—Mucous membrane of the cardiac portion very different from that of pyloric: former presenting a dark, dingy, blackish appearance in different parts—not from extravasation, but from transudation through the coats of the vessels, giving them the appearance of greater breadth than they possessed. Where the vessels were close together, the whole had a dingy black appearance. The larger vessels in this part distinct from the dark blood they contained, but they were not distended. Mucous membrane softer and thinner than natural. The pyloric portion of a dirty palish pink, with a peculiar mottled appearance, produced by tawny white spots under the pink. This appearance not at first very striking. There were also depressed points; the largest about the size of the head of a probe, round which were slightly flattened rims of elevation. The mucous membrane of pyloric portion much thicker and more adherent than natural. Duodenum dark, red with vascularity. Upper portion of jegunum more vascular than natural. Rest of intestinal canal healthy—merely a questionable slight patch in the rectum.

Contents of the Stomach, about 12 ounces of a dirty brownish-coloured fluid: floating in this were some farinaceous grains, either barley or rice.

Head.—Arachnoid distended with effusion of serum between it and the convolutions. Ventricles contained about an ounce of serum. Plexus choroides like a bunch of little cysts, from some cause. Patches of ossific deposit on the internal carotid, also the basilar and vertebral. S. S.

Nov. 1833.

Experiments made with the Infusion and Grounds of Coffee, submitted to me by Mr. J. Butler, Jun.

1st. One ounce of the infusion of coffee was carefully filtered through a double filter, and then evaporated in a perfectly clean platinum crucible to dryness; by gently heating the residuum by means of a lamp, all the extraneous matter, as the coffein, &c. &c. were expelled. The black matter left in the crucible was then transfused into the bulb A, of a clean glass tube, blown into the accompanying form.

The flame of a spirit-lamp was then applied to the part of the tube B; the space between the bulb, A, and the shoulder, B, having been filled with fragments of recently ignited charcoal previously.

As soon as the charcoal between A and B became red-hot, by application of the alcoholic flame, the flame of another spirit-lamp was applied to the bulb A. Immediately on application of the second lamp, a sublimate was injected into the interior of the tube, about C; care having been taken to stop lightly with lint the upper end of the tube. The sublimate so obtained, on farther examination, was found to be metallic arsenic: not only by the brilliant steel-like ring and spots lining the interior of the glass tube, but also by the smell—a small portion having been volatalized in the air for this purpose.

These experiments were repeated several times, in green and thin glass tubes, with the same results.

Second.—Another portion of the filtered infusion of coffee was treated with sulphuretted hydrogen gas, after having

been acidulated with pure muriatie aeid, and a well-known yellow preeipitate of sulphuret of arsenic was produeed.

Third.—A solution of sulphate of eopper was added to another portion of the infusion of coffee, after having added two or three drops of liquid ammonia, and the usual apple-green precipitate (Scheele's green) was obtained.

Fourth.—By repeated and very eareful filtering, the infusion of coffee was sufficiently deprived of its colouring matter to render the test of the ammonio-nitrate of silver applicable, and the following method was adopted, and with sueeess: a perfeetly elean camel's-hair peneil, dipped into the filtered infusion, and drawn over the surface of the infusion of eoffee, when a beautiful yellow colour was produeed, indieative of the presenee of arseneous aeid.

Fifth.—The eoffee-grounds were boiled in distilled water for five minutes, to whieh was added a few drops of the liq. potassæ, and filtered while hot. One ounce of the filtered solution was treated as No. 1; and although no metallie was produeed, yet, on breaking the tube, and exposing its contents to the aetion of the flame of a spirit-lamp, the alliaeeous smell of arsenie was easily observed; the quantity, therefore, remaining adhering to the grounds of the coffee must have been very small. In another experiment, however, the metallie appearanee has been obtained.

Sixth.—An infusion of fine coffee was submitted to the same tests as eomparative experiments, but without produeing any of the foregoing results.

Seventh.—The contents of the stomaeh were diluted with two ounces of distilled water, and then filtered. To the filtered solution were added a few drops of pure acetie acid, and then boiled for two or three minutes, keeping it well stirred with a glass rod: the whole was then filtered, in order to separate the suspended animal matter. One fluid ounce measure was then evaporated to dryness, and the residium mixed with a portion of black flux, and then sufficiently dried by keeping it constantly stirred with a glass rod. The dried matter so obtained was treated as No. 1, but no metallie appearances obtained, neither was the smell in vapour observed.

James Marsh,
Woolwich.

CIVIS MEDICUS

ON MEDICAL REFORM.

LETTER III.

To the Editor of the Medical Gazette.

Sir,

In my second letter, in your 8th No. (1833), I directed your attention principally to two points:—1. The self-elective and irresponsible nature of the present governing bodies of the three statutory sections of the medieal profession, as direetly or indirectly the great souree of our grievanees; 2. The justiee, expedieney, and neeessity of such organic changes in each, as would render their governments elective and responsible. Without sueh abandonment of the vicious and vitiating practice of self-eleetion, and without the full adoption of the manly and sole permanently salutary prineiple of free eleetion, I maintained that all other reforms would be unsatisfactory for want of trustworthy and efficient exeeutive machinery; and went even so far as to state my eonvietion, that if parliament would limit its interference for the present to granting us periodieally eleetive eouneils, we should be in a situation to work out most other desirable changes by ourselves, and should soon have the profession on a footing of peaee, health, and respectability, hitherto unknown to English medicine.

My present purpose is to explain partieularly what I eonsider the best sort of govermment for us, and to shew the facility with which such a government might be eonferred on us. Every body understands, in a general way, the meaning of representative government. It is this:—A number of persons having eommon interests to promote, but unable, owing either to dispersion or to excessive numbers, or to both, to meet together for consultation or debate, without inconvenience, agree to select out of their body a committee, delegation, or council, to whom they may for a period intrust the transaetion of the eommon business, with the understanding that such committee shall report to the general body; to which also it must apply for instructions and authority in all important matters not otherwise provided for. This mode of government secures the advantages of both extremes—of oligarchy

and democracy; combining much of the dispatch, quietude, and decency of the one, with the manly frankness and above-board dealing of the other; and professes, besides, advantages peculiar to itself. Now the essential principles of this mode are,—1. recognised equality of rights and privileges amongst the mass; with, 2. temporary delegation of powers for specific purposes to a few. These are the principles, variously modified in their practical applications, of all our most approved municipal governments: and what, perhaps, is still more to the point, if not in precedent, at least in principle, they are fundamental principles of most voluntary associations of intelligent men, whether for public or private objects—for business or for pleasure. The public is an ignorant, credulous, improvident master, and institutions professing to exist and labour but for the public's good, have been commonly found to work for the promotion principally of the private interests of *soi-disant* ministers; but private, voluntary associations, literary, commercial, social, &c. have generally better attended to the common weal, and have so organized themselves as to keep the officer dependent and subordinate, and to secure the mastery to the constituency or employers. The principle of government by delegation, or responsible committee or council, is already established in numerous medical associations—many medical charities are so governed—and its adoption into the higher departments of medical polity may be effected, one case only excepted, with very little difficulty.

The Surgical department and the Pharmaceutical branches of the profession are already governed by councils, so that with regard to them little further change is required than to abolish the self-elective principle, and render the senators or councillors eligible by a general poll of the metropolitan licentiates or members. Probably in the surgical department it will be found desirable to establish different classes, as it unquestionably is in the medical:—1. men of merely medico-surgical education, or surgeons simply; 2. men of literary and general, as well as strictly professional, knowledge, or doctors of surgery. Should that desirable change be effected, of course the councillors, teachers of surgery, &c. should be admitted from the higher grades only; and in the pharmaceutical department likewise, some such division into classes might, though perhaps less urgently required, be not without considerable advantages. In all trades and professions, populous spots and districts require more skill and ability than the sparingly peopled, *because they can reward them*: to require that the hamlet apothecary should provide himself before starting with the same stock in trade as his brother of the city, would be practically to resolve that cities and towns only should have apothecaries. By the establishment of orders or grades, however, the wants of differing districts may be most easily supplied, and to each a practitioner or practitioners furnished, such as it could maintain;—but of this more fully in my next letter. With regard, then, to the surgical and pharmaceutical branches of physic, there can be little difficulty in applying the representative principle to their government.

But with regard to the Physicians' department, matters are less simple. The College of Physicians is, compared to the two former, an old institution. It has been constructed in the spirit of another and a much darker age; but interests have grown up under it, and property has been bequeathed to it; and though ivy-grown and mouldering, it is venerable still, so that, though as an ardent friend to physic, I would show no mercy to proved abuses, yet as an admirer of all that is correct in conduct, and gentlemanly in manners, and solid or elegant in learning, I should feel myself bound to treat with the utmost delicacy the feelings of its fellowship. So much as to the spirit in which I approach the question in Pall-Mall East. Now the principle of rank applies quite as forcibly to the medical department as to either of the others; nay, it is much more necessary in the medical department. It is, in fact, from the non-recognition of this principle by the College, or else from the gross abuse of it, that the practice of physic has, in great part, retired from its proper asylum, in Pall-Mall East, to Lincoln's-Inn-Fields and Blackfriars. The diseases of the poor, and generally of the less wealthy classes, require the same skill, but do not yield the like returns with those of the more affluent: and, which is practically the same, a scattered population will rarely reimburse a practitioner whose education has included

extra-professional accomplishment; so that the College of Physicians, as the licensing authority, should have taken steps to provide the public with two classes at least of physicians,—1. a lower class, not University men or M. D.'s, but licentiates of the College, or doctors simply; 2. a higher order, graduates not only in physic, but also in arts (Anglicé), sciences (Gallicé), philosophy (Germanicé), or who should by examinations, free and searching, prove themselves equal in learning, &c. to M.D.'s, and to A.B.'s, or A.M.'s. If the College had acted on this plan, how different would be the present position of the profession—every thing would be in its proper place—physic would repose under the protection of the College of Physicians, surgery under that of the College of Surgeons, and Apothecaries'-Hall would attend to its proper functions—viz. the regulation of the pharmaceutical department, leaving the practice of physic to those that have carefully studied, and may be presumed most thoroughly to understand it: so that instead of 200 licentiate physicians, 1000 surgeons, and more than 2000 apothecaries, all engaged in the practise of physic in London, for which, however, the first 200 only are ostensibly qualified by appropriate studies and examinations, we should have some 1500 to 2000 physicians of both classes, 400 surgeons at the outside, and some 3 or 400 apothecaries, or properly-educated pharmacopolites. There can be no doubt whatever in the mind of any impartial examiner of the past and present states of British and foreign medicine, that such, or some such, would now be the mutual proportions of the different sections of the profession, had not the natural course of demand and supply been impeded and warped by the wholly erroneous views and despotic authority of the College of Physicians. The establishment of the chemists and druggists as medical practitioners or physicians, it is familiarly known, took place something more than a century and a quarter ago, by the reversal, in the House of Lords, of the judgment given against Rose in the Queen's Bench. Up to that time, and for more than a century, the College had carried on a constant war against chemists dabbling in physic, and had, towards the end of that period, in addition to regular hunts in the courts of law, contrived a new method of encountering the smuggler, by underselling him in the popular market. By subscriptions amongst themselves and friends, the fellows were enabled to establish three dispensaries, charities, previously little known, I believe, in England, at which they gave advice to the poor gratuitously, and medicine at prime cost. But dispensaries and prosecutions alike failed to prevent the people from consulting chemists and druggists, when physicians could, from expense or scarcity, not be procured; and chemists and druggists accordingly continued, in defiance of Collegiate authority, to practise physic until the remarkable decision above alluded to, which, while it destroyed a vexatious monopoly at the time, degraded the profession of physic. But the College benefitted nothing by the sharp and just rebuke of their friends and fellow-collegians of the noble house. Though but 114 (anno 1704) in number, licentiates included, they still persisted in the unjust and absurd desire to monopolize the practice of a metropolis containing very many hundred thousand inhabitants. It remained for a more enlightened day to see that smuggling can only be rooted out by opening or widening the door to the regular trader; and that the proper means of checking and exterminating unauthorzed practitioners, would be the admission, on easy, or at least reasonable terms, of a sufficient number of educated persons to the privileges and emoluments of medical practice. Thus, and thus only, in physic, as in other crafts, can good work and low prices be secured to the public, and the inducement to dealing with contraband traders and supporting illegal practice, be withdrawn. But this method of suppressing incompetency and promoting competency, has not yet been adopted, or perhaps by the College, as a body, even thought of. And it is in great measure because I am satisfied that the spirit and knowledge of the time, working upon and by means of sound organic machinery, would, in the natural course of things, and speedily, effect all the desirable changes above touched on, without extrinsic aid, that I urge, through the Gazette, the adoption of my plan of limiting the demand for reform to the abolition of the self-elective system, and substitution of the other on the represen-

tative principle. Now the application of the reform I advocate to the College of Physicians is easily enough effected, assuming the establishment of orders, distinguished not by nominal, as at present, but by substantial differences. Let the physicians be divided into two orders:—1. Licentiates, men not academically educated, or else graduated candidates, for general practice, not choosing to demand the examination and privileges of an M.D.; this class to hold the position of the present licentiates, and be excluded from all share in professional government. 2. Members or Fellows, M.D.'s, holding with the former the College license to practise, but enjoying likewise the use of the libraries, museums, &c. of the College, and being eligible into the governing council. From amongst the Fellows should be elected annually, or for a short term of years, a committee or senate of a few dozen members to transact business, and report periodically to the general body the substance, &c. of its proceedings. To this senate should be entrusted all the powers hitherto exercised by the Fellowship—viz. the functions of the Censors' Board, of the Elects, &c. besides the management of the financial and domestic affairs of the College; and if the senate were sufficiently numerous to provide room for the great majority of truly eminent members of the College, (which a senate of two or three scores, I am confident would do,)—and if further publicity of proceedings on all more important questions were secured to the general Fellowship—we physicians should then have a government animated by a modern and patriotic spirit, and the nation a senate of health to which the highest questions of medical polity and of state medicine might safely be entrusted.

My next letter will, with your permission, maintain, 1st, the expediency of having two grades at least, distinguished by real differences, in each division of the profession, in opposition to the Academie de Médecine, the Lancet, the Westminster Medical Society, &c.; and the propriety of retaining the principles of *examination* and of *grace*, or general consent, as channels of transition for merit and ambition from the lower to the higher grade, with proofs of the impracticability of founding any useful distinction between *University men*, on the principles of education (however tested), or standing, or any other principles of rank or exclusion. 2dly. Of the absolute necessity of numerical limits to the governing portion of each section of the profession, to prevent the redundancy, unwieldiness, and consequently inefficiency, otherwise inevitable, whatever may be the mode of election; and should, unfortunately, the present vicious self-elective plan be retained, to keep within bounds its incurable tendency to favouritism and abuse. 3dly. On the compromises with existing interests (viz. of present Fellows and Licentiates) required by justice or expediency.

Your obliged servant,
CIVIS MEDICUS.

London, Dec. 9, 1833.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Illustrations of all the most celebrated Medical and Surgical Works, comprising a Complete System of Morbid and Descriptive Anatomy. The First Number. Dulau.

THIS is the specimen number of one of the boldest undertakings that the Brussels publishers have yet ventured upon. It is the commencement of the English series of the *Iconographie*, which has been so spiritedly brought out in the Belgian capital within the last year. The work is to embrace a uniform edition of the plates of Cruveilhier, Bourgery, Cloquet, Tiedemann, Blandin, Devergie, Munz, Alibert, Velpeau, Breschet, Manec, Boivin and Duges, &c. If this be not a prolific employment of the lithographic press, we cannot well conceive what should be; it appears to us to be one of the most singular examples yet displayed of the services which lithography is likely to render to medical science. That it will be attended with a corresponding spread of scientific information we have no doubt; and the advantages to the student must be incalculable, as it is now put within the most ordinary means to

be possessed of the illustrations of all the standard foreign works, on the several branches of medical knowledge. The arrangements of the publication besides, we find, are so methodical, that purchasers may accommodate themselves by taking only those plates belonging to the works of which they may desire to have the illustrations. The price is exceedingly moderate.

We have examined the plates in the number before us, and are highly pleased with the fidelity with which the originals are followed. There are in this fasciculus three lithographs from Cruveilhier, one from Bourgery, one from Cloquet, and the last from Blandin; and each number is similarly to consist of six plates, which may be had separately.

It is intended, we understand, that this work shall be published in all the countries of Northern Europe, and in America; the plates, as well as the letter-press in the various languages, issuing from the spirited firm at Brussels.

The History of a Case in which Animals were found in Blood drawn from the Veins of a Boy; with Remarks. By J. S. Bushnan, F.L.S. &c.

The boy in whose blood the animals were found, of which we have here an account, laboured under influenza; and he is at present, we understand, living and in good health. The animals were found in the serum of his blood after veneseetion; they were of the colour and size of the larvæ of the tipula oleracea, and corresponded with this species also in structure. Mr. Bushnan has treated his subject very learnedly, and given us a very amusing half-hour in the perusal of his remarks.

MEDICAL GAZETTE.

Saturday, December 21, 1833.

FACULTY AGAINST FACULTY:

OR,

THE MEDICO-CHIRURGICAL REVIEW *versus* DR. JAMES JOHNSON.

When the question regarding "One Faculty" was put at the Westminster Medical Society this day fortnight, it remained undecided whether the "ayes" or the "noes" had carried it,—in consequence of which a ballot was demanded. This took place last Saturday, when the members deliberately rejected, by a majority of 31 to 21, this levelling scheme which originated with Mr. Wakley, which was adopted by Dr. James Somerville, and which was finally and formally brought forward by Dr. James Johnson. When it is considered that the Society in question is chiefly attended by general practitioners, whom the proposal was calculated to flatter, and to whom it held out an apparent though fallacious prospect of benefit; and when it is remembered besides, that no artifice was spared by the radical press to persuade them to its adoption, we cannot but regard the triumphant manner in which it has been thrown out as a result in the highest degree creditable to their judgment and good sense.

The circumstances under which the measure was introduced were peculiar—were calculated to mislead; and we have reason to believe did actually bias the opinions of some persons. We allude to the fact of the proposal, "to petition Parliament for the *assimilation of the whole profession* into one Medical Faculty," by which they might be "united in one great and *uniform* mass," having emanated from a gentleman holding an official situation under government, and known to have been at no distant period in constant communication with Mr. Warburton, the mover for a Parliamentary committee of inquiry into the state of our profession: we say that this circumstance had led to an impression on the minds of some, that Dr. James Somerville's proposal was to be received as an indication of what was contemplated in a higher quarter—a kind of feeler, in short, to ascertain the sentiments of the profession. The result has shown that the proposer of this Quixotic scheme was himself totally mistaken as to the

reception which it was to receive, and if it were indeed intended as a straw thrown up to show how the wind blew, it affords additional reason for congratulation that it has not been carried in the direction expected. We doubt, however, that there was any foundation for this idea; and with respect to the members of the Government, we are quite convinced, from various circumstances, that no such views are entertained.

One strong argument for this opinion is derived from the contents of the pamphlet on Medical Reform, recently published by a "Retired Practitioner." This brochure is the production of a man of the highest attainments, residing with one, and in constant and intimate communication, with all the leading members of the administration—himself a distinguished scholar and writer, than whom no one is more likely to be consulted touching the arrangements of a profession which was once his own. Now the doctrines of a "Retired Practitioner" are diametrically opposed to those advocated in the resolution which proposed "the assimilation of the whole profession." Rejecting a forced level to which all must rise, and which none can pass—as in its very nature destructive of all emulation—all incentive to exertion—and every stimulus to advancement—*he*, on the contrary, proposes gradations of rank open to all, and which may be successively attained by every one possessed of talent and ambition—free from the trammels of prescriptive rights and unfettered by exclusive privilege, or chartered monopoly. This is surely the common-sense view, and the one best accommodated to the wants of society: it is also assuredly the most liberal view, which opens a path to all—holds out a motive for individual exertion—and consequently promotes the general advancement of medical science and professional respectability.

There is, however, in the idea of "one Faculty," a speciousness and appearance of simplicity which is apt, at first, to attract, till, on closer inspection, its utter impracticability becomes apparent. In judging of any question, the first thing to be determined obviously is, what is its precise meaning? But very different interpretations have been put upon the "one Faculty" by different parties, even among those who advocated the measure, and of course imagined they were supporting the same cause. Wakley, with whom, as we have said, the scheme originated, has for some time been unsuccessfully attempting to carry it into effect, in what is called by him the "London College of Medicine"—but better known by the more sounding appellation of the "Collegium Wakleyanum Medico-Chirurgico-Apothecarium." Now his interpretation is the only clear and unequivocal one we have met with, and means the institution of a body who shall subject *all* to one common examination, and confer on *all* one common title—that of Doctor: thus, as Dr. James Somerville says, "assimilating the whole profession," and "uniting them in one great and uniform mass": while the same views, as we shall presently shew, are adopted, to their fullest extent, by Dr. James Johnson,—even to the establishing of one common and universal designation for all practitioners of the healing art. Those three authorities, then agree; and to them we shall at present confine our observations.

To answer the out-pourings of the Lancet would be a work of supererogation, as they have now too little influence any where to make it necessary; and as Dr. Somerville has limited himself to a statement of his opinions, without offering any arguments in their support, we are thus without the means of entering the lists with him;—besides which, as he did not appear to support the measure when it came to the ballot, we are left to presume that his sentiments may have undergone a change. But with

Dr. James Johnson the case is different: by his affiliation of the progeny, he has placed himself in the position of its natural guardian, and has further vindicated its rights in sundry elaborate pleadings. We should be sorry to do any thing to hurt the feelings of our contemporary, but as he, unlike our hebdomadal antagonist, does exert a certain influence in the profession—as he is very active in disseminating his opinions, by making speeches at the various debating societies in the metropolis (which speeches are frequently reported in the newspapers)—and as he has, besides, the command of a journal of his own, in extensive circulation—we think it a public duty, by every fair means, to counteract the mischief (he will, we trust, excuse the strength of the expression) which, in our humble judgment, he is at present inflicting upon the profession. We shall, therefore, proceed to examine the arguments adduced by him in support of "one Faculty;" in doing which, we do not despair of bringing against them an authority which we feel assured the public, and we almost think our contemporary himself, will regard as not inferior to his own.

In descanting upon the anomalies in medical polity which rendered the assimilation of the profession desirable, Dr. Johnson first dwelt on the artificial distinction between medicine and surgery; and observed, that "the most prominent of these was the present division of practice into medical and surgical."

"In times of gross ignorance," he continued, "it might have been venal to establish such a distinction, but its continuance when it was notorious that every physician was compelled to study the same elementary knowledge as the surgeon, and the surgeon the same as the physician, was inexcusable in theory, and in practice impossible, as was evident from the fact, that the great mass of the profession, though called surgeons, were the physicians of the community. *If the profession of medicine admitted of any division at all, it was that of a separation of chemists and pharmaceutists from the practitioners of medicine——*"

Now we entirely concur with Dr. Johnson as to the theoretical unity of all branches of the healing art, and the difficulty of drawing precise lines of demarcation between them; yet we hold that in practice there are certain conventional distinctions sufficiently well understood, and that the result has been beneficial both to science and to society. However, instead of troubling either our readers or our opponent in the argument with any reasoning of our own, we shall request their attention to the following observations, addressed to Mr. Lawrence when he some years ago advocated an analogous, but less sweeping system of equalization,—and addressed to him, be it remarked, by the EDITOR OF THE MEDICO-CHIRURGICAL REVIEW!

"*When Mr. Lawrence contends that there should be no division of the healing art, whether as respects tuition, practice, or rank—we differ from him* toto cœlo. Instead of the recent progress of medical science giving "a fatal blow" to the divisions of labour, either in teaching or practising, we see these divisions almost annually increasing; and we are really astonished how Mr. Lawrence can reconcile what he says in the lecture-room, with what he sees every day around him. What would be thought of the state of brain in that man who should open a lecture-room in this metropolis, for the purpose of teaching anatomy, physiology, pathology, therapeutics, surgery, &c. &c.? He would soon be put under restraint in the New Bedlam. Did it never happen to strike Mr. Lawrence's mind that, if a gentleman, after studying all, should cultivate *one* of the above branches with more care than the rest, he might be able to teach that branch with more success? And if he looked about him, might he not perceive that the same observation applies to practice." * * *

"*For all practical purposes, then, there is sufficient distinction between physic, surgery, and midwifery, for the metropolis and every large city to afford practitioners devoted to one or other of*

these branches."—*Medico-Chirurgical Review*, vol. 6, p. 267-8.

Dr. Johnson having, in the passage first quoted, taken a very different view of the matter from the Editor of the Medico-Chirurigcal Review, and assumed the theoretical and practical indivisibility of the medical profession, proceeds, as a necessary consequence, to argue for the assimilation of its members—at the same time, rather inconsistently, giving us a passing hit for calling him a "leveller"; though he pleads guilty to the charge nevertheless.

"It had been said, that this Society was composed of 'levellers,' because they wished to reduce the extent of education to the lowest scale. The name was probably true; the alleged ground was false. Not a syllable had been uttered there to justify such a charge. He (Dr. J.) would be a 'leveller,' it was true, but it was *by elevating the lowest minimum of education to the greatest* MAXIMUM, that he would level the distinctions in the profession."—*Ibid.*

Here, again, while turning in our minds what might be said in answer to Dr. Johnson—the Editor of the Medico-Chirurgical Review came to our aid, and saved us a world of trouble.

"Now, if Mr. Lawrence had given himself the trouble to think for one small minute before he spoke, he would have perceived that such an equalization would place the necessary acquirements above the reach of a great proportion of general practitioners in the country—and that it would reduce the said acquirements to too low a standard for those who aspired to honours and distinctions in cities and in the metropolis. The consequence of such an attempt at equalization would be, a degradation of the upper classes of medical society—an exclusion of the lower classes—while it left the middling classes just where it found them. If *the examination were at all impartial, and adapted to the wants of society, it must be calculated at a* MEDIUM *rate*—and, consequently, it would be too low for the one extremity, and too high for the other."—*Ibid.*

The only other proposition maintained by Dr. Johnson, connected with the present discussion, naturally follows—namely, an equalization of grade and designation throughout the whole profession. We shall give it in his own words.

"Let those who chose to go to academies for additional honours, in God's name, do so; but one thing he would insist on, that *every* practitioner should possess the title of 'doctor,' in virtue of his rank and acquirements. The same libellers said, that if all grades were merged into 'doctors,' there would not be men enough in the profession to attend the sick poor. He denied that. There would be abundance of practitioners."

It may perhaps be remembered, the plan broached some years ago by the distinguished surgeon above alluded to, whose opinions our contemporary took so much trouble to confute, comprehended setting aside the "present artificial distinctions," by establishing one common standard of qualification for all, to be determined by one examining "BODY," or, in the new nomenclature, one "FACULTY." Now it happens curiously enough that upon this point also the Editor of the Medico-Chirurgical Review has favoured us with an answer to Dr. Johnson. Alluding to the remarks made by Mr. Lawrence on the medical corporations, he adds, by way of comment—

"Like a true radical, he is dissatisfied with all existing institutions of this kind, and proposes the appointment of 'an examining *body*,' (in which *somebody* would doubtless take a leading part) empowered to test all candidates for medical practice, 'without any regard to the present artificial distinctions;' which examination 'should authorise the individual to practise any or all parts of medicine, *and none should be allowed to practise without it.* Thus, then, according to this Utopian

plan, the metropolitan physician and surgeon, and the village apothecary and accoucheur, must undergo the same examination, and consequently must have the same general and medical education! This is EQUALITY, with a vengeance*!

Here, then, we conclude for the present. Comment, indeed, would be superfluous; and were we disposed to enlarge upon the subject, we should be checked by the just remark of the Editor of the Medico-Chirurgical Review, which, as it is his concluding words to his opponent, so it shall be our last extract from him in answer to Dr. Johnson.

"The fact is, that Mr. Lawrence's scheme in medicine, is just what the scheme of Hunt and Cobbett is in society at large —EQUALITY. The one scheme is as feasible as the other, and both will be accomplished about the same period."

Such *were* the opinions of the Editor of the Medico-Chirurgical Review;—such *are* the opinions of Dr. James Johnson: confirming still the caustic lines of the moralist—

" Manners with fortunes, tempers turn with climes,
Tenets with books—*and principles with times.*"

CLINICAL OBSERVATIONS
ON THE MEANS OF
REMOVING THE DEFORMITIES CAUSED BY BURNS.

By BARON DUPUYTREN.

From the " Leçons Orales," published periodically under the Baron's inspection.

[Concluded from page 414.]

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OF THE ANATOMICAL AND PATHOLOGICAL CHARACTERS OF THE CICATRICES FOLLOWING BURNS.

IT is of great importance that we should obtain an accurate knowledge of the physical characters of cicatrices, in order to be able to calculate the effects which may result under particular circumstances. The cicatrix, then, is formed by the exudation of lymph, which, becoming organized, exhibits the appearance of a thin pellicle, of a reddish colour, and very fragile; beneath this is the cellulo-vascular tissue, which it covers. During several weeks, and sometimes during several months, after its formation, the organization of the cicatrix goes on, becoming progressively more perfect; and it is only by a secondary organic action that it acquires the density necessary to qualify it to supply the place of the lost skin. The consecutive retraction only ceases when the cicatrix has become white and solid, such as it is to remain during the rest of life. The cicatrices are covered by a slight epidermis, which is very adherent and shining, the existence of which may be demonstrated by maceration, or by the application of a blister. Beneath this is that fibrous layer which I have called " the tissue of the cicatrix," on which the phenomena of the retraction depend. The cicatrix is only pierced by a small number of exhalant or absorbent pores; hence its surface is almost always dry, even when perspiration bedews the rest of the body. Neither do we find on the inner surface of the cicatrices those fibro-cellular apertures which, in the natural state, exist beneath the skin, and between which are lodged the separate little nodules of fat. A tissue, composed of laminæ more or less close, and destitute of adipose matter, unites the new skin to the subjacent parts; and a depression exists, which is in proportion to the loss of substance, and to the extent to which the adjacent parts were previously furnished with fat. When the lesion has penetrated to the muscles, tendons, or bones, the cicatrix usually adheres intimately to these organs, and is dragged out of its place when they move, thus constraining their functions.

It is a remarkable fact that, whenever parts of different organization run into a common cicatrix, they lose before passing into it their own proper texture, and degenerate into a homogeneous fibrous substance, which becomes blended with the new formation, to the inner surface of which they adhere. This disposition of parts is especially remarkable in muscles, tendons, vessels, and other organs implicated in a burn of the fifth degree, or which contribute to form the stump of a limb destroyed by a burn of the sixth degree.

The causes of the indelible nature of certain cicatrices have already been explained, as well as why they preserve, during the rest of life, the form as well as the organic characters which are proper to them. But a fact which ought to be particularly attended to, because a knowledge of it is of great importance under different circumstances, is, that they vary in appearance, and to a certain degree even in tex-

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* Ibid. The italics and capitals in this paper are given as in the original.—ED. GAZ.

ture, according to the causes which produced the solution of continuity from which they have resulted. In spite of years, and notwithstanding the changes which take place in their organization, the eye of the practised surgeon can readily distinguish the cicatrices of burns from those of incised wounds, and both from the cicatrices which follow cancerous ulcerations, syphilis, scrofulous abscesses, &c. You will easily understand of what importance it is, in legal medicine, to be able to make such distinctions, as well in determining the identity of individuals, in order to ascertain the cause which had produced the breach of surface.

The development of vascularity in cicatrices is very variable. In most instances they only exhibit very minute capillary ramifications, which are with much difficulty traversed by the finest injections; and in persons who have scars on the face it may be seen that they do not participate in the colour produced on the surrounding skin by heat or by emotion. It is probable that cicatrices receive nerves, but in small number. They are not insensible to the impression of foreign bodies, and when inflamed become very painful. It is also well known that their susceptibility is very great to atmospheric impressions, and that they accurately announce, by painful sensations, the variations which occur in the thermometrical and hydrometrical states of the air. Like all other anormal textures, cicatrices are easily irritated, and are even destroyed, particularly by inflammation, with prodigious rapidity. In most cases it requires only a few days, or even hours, to destroy the process of reparation of many months, and to restore to the solution of continuity its original dimensions. But this destruction is often superficial; it does not implicate the whole thickness of the texture which forms the cicatrix, and its reproduction is effected with great rapidity. As to the rest, cicatrices are usually exempt from exanthematous affections—such as small-pox, scarlatina, and measles; remaining pale amid the general redness of these diseases: the reverse of this is only seen where the solution has been very superficial, the skin having been partly preserved. The intimate adherence of cicatrices to the subjacent parts, and their defective power of supporting inflammation, have led to the general rule in surgery of avoiding to carry incisions either through them or into their immediate vicinity.

Cicatrices become causes of exemption from military service when they adhere to muscles, tendons, or bones, so as to impede the execution of movements which ought to be perfectly free. So likewise extensive cicatrices, such as those which occupy considerable portions of a limb, ought to be regarded as disqualifying from active service, even although the movements remain unimpaired; for such large surfaces of new tissue could not be exposed without danger to prolonged friction, nor even to considerable perspiration, and other sources of fatigue connected with military life.

The cutaneous adhesions which unite together parts which have been burnt are at first large, soft, and reddish; the successive changes of texture which the cicatrices, whence they are produced, undergo, gradually renders them more dense and solid. They are more or less stretched by the movements of the parts; and by this kind of dragging they become elongated to a certain point, beyond which it is impossible to carry their extension farther. These adventitious bands are then completely organized and analogous to the membranes of the *palmipedes*. It is only when they have attained this definitive state that they can with propriety become the objects of surgical operation, with a view to their removal. There is not a season that I have not practised a certain number of such operations in this hospital, and taken occasion to illustrate the above principles.

OF THE MEANS OF CORRECTING DEFORMITIES, AND REMEDYING THE LOSSES OF FUNCTION, RESULTING FROM CICATRICES.

Chronic burns of the first degree.—The cicatrization of burns, with loss of substance, left to itself, gives rise to a prodigious number of deformities, more or less severe, and to losses of function of corresponding extent—the consequence of inequalities, columns, bridles, adhesions, depressions, &c. But before speaking of the operations required for these, I shall briefly advert to the effect on the tissue of the integument produced by the slow and gentle, but long-continued action of heat; or, in other words, the effects of burns of the first degree in the *chronic* form. The first effect of this is a sanguineous congestion of the skin, and this is followed, after a longer or shorter time, by a withering of the parts, which become soft and wrinkled. At a more advanced period, *vergatures* manifest themselves, which are permanent, and which, at first red, become livid, yellow, copper-coloured, or brown. They are the consequence of an unequal development of different points of the cutaneous capillary system. If the parts be removed from the action of heat, they may be dissipated either spontaneously or under the use of baths and discutient or astringent lotions. But if the exposure to heat be continued, they increase in num-

ber, extend in various directions, and form lines of greater or less breadth, which cross each other, and leave spaces of various shapes and sizes between them, on which the skin is heathy; these lines become of a deep hue, and sometimes even black. In this state they form mottled spots, which are not only difficult to remove, but are sometimes not to be effaced when of long standing and dark colour. In this variety of the first degree of burn, in its chronic form, the epidermis is scarcely altered in its composition or colour. If boiling water be poured on the part in the dead body, the epidermis becomes separated, and the mottling is seen to exist in the rete mucosum, in which texture, therefore, this degeneration has its seat.

The treatment of these mottled spots consists in the removal of the cause which has produced them, and in the long-continued use of astringent lotions, particularly the acetate of lead. In general, however, these means prove insufficient, and we must then try the effect of combining with them methodical pressure. It is not uncommon to see *varices* produced by this gradual but continued application of heat. When this happens, the same treatment only is required as when they arise from other causes.

Enumeration of various deformities.—Let us now pass on to burns with loss of substance, of the number and variety of which you may form some idea from the following *resumé* of those which I have myself witnessed.

I have in some cases seen all the integuments of the base of the cranium, and with them both ears and eyebrows, forcibly dragged upwards by a cicatrix, attracting them towards the crown of the head; in others, the upper eyelid and eyebrow immoveably fixed on the forehead, the eyelids turned inside out, and bound down in that situation by adventitious adhesions; the commissures of the eyelids forcibly dragged from their place by cicatrices on the temple or nose; the ala of the nose pulled upwards, and the aperture of the nostril obliterated; the commissures of the mouth pulled upwards, or downwards, or to one side; the upper lip united to the columna nasi; the same joined to the lower eyelid; the lower lip adherent to the chin; the ears glued to the temples; the aperture of the ear closed; the head bent forward upon the neck, and the chin adherent to the upper part of the chest; the head and shoulder brought together; the mammæ horribly deformed, the adhesions preventing their development; trunk bent forward by bands extending from the thorax to the abdomen; the shoulder depressed towards the hip, and this dragged up by a cicatrix occupying the side of the trunk; the elbow applied to the trunk by a cicatrix in the axilla; the forearm bent on the arm; the hand on the forearm; the fingers variously bent and united; the penis united to the integuments over the linea alba, and having a kind of adventitious sheath, like that possessed by some quadrupeds; the scrotum adherent to the thighs; the thigh kept in a state of flexion by a cicatrix in the groin; the inguinal ring weakened so as to occasion hernia, the cicatrix acting in such manner as to prevent the requisite support by bandaging; the leg bent on the thigh; the feet turned completely upwards or downwards by burns in childhood, on either surface of the limbs; the great toe pulled in upon the sole of the foot, so as to prevent the individual from walking. Such are the most striking deformities which I have seen, several of which I have sometimes witnessed in the same person. Most of them I have seen several times; but some are much more common than others—burns of the hands, for instance, owing to the mechanical instinct which leads us to extend these parts when any danger is threatened: next in succession after these come the lower extremities, and then the upper. Numerous and varied as are the deformities which result from burns, they are nevertheless resolvable into a small number of heads: all, in fact, consist either in cicatrices which are too short—or which are too salient—or which produce preternatural adhesions or obliterations of apertures—or, lastly, which cause the loss of parts. These last are irremediable, and I have therefore nothing farther to say with respect to them. As to the others, I have already pointed out their mechanism, and the means best adapted to prevent their formation; and I have now to consider what is to be done when they are already present.

Mode of operating on cicatrices.—The treatment most applicable to them, consists in general in bringing back the parts to the condition which they previously possessed, by means of an operation. But the success of this proceeding does not depend exclusively on the manner of its performance, or on the exact observation of the established rules of art; it also depends on the disposition of the cicatrix which is the subject of our interference. As a general rule, the more superficial the adhesion, the easier and more effectual is the operation; while, on the contrary, it is more difficult and uncertain, the more deep has been the extension of the burn. In this last case, indeed, the mere displacement may be obviated, but the movement of parts seriously injured, or destroyed, it is nearly or altogether impossible to restore. We have seen above at what epoch the ci-

catrix may, with propriety, become the object of surgical interference: for instance, first, we must not attempt to correct the deformities of which we speak till some months, or even some years, after the formation of the cicatrix. 1st. This rule cannot be deviated from, without the risk of seeing the loss of substance recur, in consequence of the new textures being again destroyed; its organization remaining being so incomplete as to lead to this result from very slight causes, and sometimes even spontaneously. 2dly. We must never operate unless we are sure of obtaining, by means of posture and bandaging, a cicatrix which is larger and less deformed than the one we desire to correct. This precept particularly applies to the face; which, indeed, it is generally most prudent not to touch: in truth, art presents but feeble prospect of assistance here, for it is far from uncommon, instead of mending matters, to find that we have increased the deformity by the addition of another cicatrix to that which previously existed. 3dly. We ought not to perform an operation except where it is calculated to restore to the parts their form and functions; and we are therefore to abstain when joints are anchylosed, or muscles and tendons destroyed: at all events we must, under such circumstances, explain to the patient, that though the deformity may perhaps be reduced, the use of the parts cannot be restored by any operation.

When the operation is deemed both necessary and practicable, the manner of conducting it varies according to circumstances. Some surgeons of the present day, of great eminence, are of opinion that the tissue of cicatrix possesses, in an extraordinary degree, the power of contraction; which it always retains, whatever be the time which has elapsed since its formation, and which the resources of art are unable to vanquish. Hence they infer that any operation which allows the cicatrix to remain is illusory, and will be followed by the same retraction as before; and consequently, that in order to accomplish the end in view, the whole of the original cicatrix must be entirely removed, and the edges of the wound brought together so as to be united by the first intention. The principle on which this opinion rests is very much exaggerated. It is true, indeed, that the new tissue is endowed with a power of retraction, but it is neither so great nor so durable as has been imagined. I have pointed out above, the changes which the cicatrices undergo from their commencement till their complete organization. These changes require a long time, and it is during this period that the contraction is observed to take place. But when the cicatrices have acquired their full degree of solidity—when the adhesions, or bands, are definitively formed—the degree of their contractile power scarcely differs from that of natural textures; and it is partly on this account that I delay the operation till the organization of the cicatrix is completed. The result of the doctrine which I am now combating would be, that, in a very large majority of cases, nothing could be done. In fact, if the cicatrix be very extensive (just the circumstances in which an operation is most required), it would be impossible to approximate the edges of the wound as directed; or if this end were accomplished, we should have a second cicatrix, with all the inconveniences of being too tight; thus occasioning dragging and constraint in the movements. Should we, then, on the other hand, leave the edges of the wound apart, that new cutaneous texture may be formed? In most cases, we should expose the patient to the most serious evils by thus exposing the subcutaneous cellular membrane, the muscles, tendons, aponeuroses, and even bones; such inflammation might be produced as should destroy the patient; neither, in many cases, would it be possible to procure a more extensive cicatrix than nature had previously formed, to repair the first loss. These considerations have led me to adopt the following mode of proceeding in such cases. If the cicatrix be too small, I make incisions across it at various points, and carried deep enough to divide it through the whole of the width and depth of the new texture; so that it may be readily extensible, but without any portion of it being removed. I then stretch the parts in a direction opposite to that in which the disease had carried them, and thus cause cicatrization with the production of new cutaneous texture. After the destruction of the contracted bands, the extension is effected by the application of the hand; while the parts are subsequently retained in their proper situation by apparatus and bandaging. If the limb is found to possess its natural suppleness, and yields without much effort and without much pain, it may at once be placed in the position which it is intended to preserve: but if the parts be stiff, and the joints but little mobile, they are only to be carried into their natural posture by slow and gradual extension. By not attending to this, very serious mischief may result; particularly, horrible pain to the patient, violent inflammation, and even gangrene. Apparatus so contrived as, by being elastic, to keep up a gentle but permanent action, affords great assistance in this branch of surgery.

The operation being completed, both surgeon and patient find themselves in the same circumstances as after the separation

of the eschar in burns—that is to say, that the former ought to direct every effort towards the formation of a cicatrix by the means already pointed out, and to oppose by every means the approximation of the edges of the wound. It is not uncommon, after the division of the principal bands, and when two or three incisions have sufficed for this, to see secondary bands manifest themselves; in which case we must not hesitate to divide them also, not sparing even one. It is in consequence of the neglect of this necessary precept that we frequently see practitioners fail, even though the operations have, in the first instance, been apparently well conducted; and thus have the patients failed to derive any advantage, after all their sufferings and their courage.

If the object be to remedy salient cicatrices, it is to be effected by removing all the projecting parts; not, however, by transverse incisions, but by means of a thin bistoury with a double cutting edge, which is to be introduced flat beneath the middle of the cicatrix, and then carried first to one end of it and then to the other horizontally, so as completely to shave off the part. This being done, the edges of the wound are to be kept apart, and the surface frequently rubbed with caustic, so as to keep it always a little beneath the level of the integuments.

If there be merely preternatural adhesions, after having incised them they are to be dissected out freely, and, in fact, beyond their origin: the parts are then to be kept separated, and pressure is to be systematically kept up at the point whence the new cicatrix proceeds—viz. at the angle where the parts join.

If we have to remedy the narrowing or obliteration of some natural aperture, this is to be done, in the former case, by the introduction of tents or of ivory tubes, variously contrived, but of a calibre much exceeding that of the natural opening, and which are to be left in long after the cicatrization is completed, on account of the great tendency of such orifices to contract. In the latter case, (*i. e.* if the opening has been obliterated) the canal is first to be restored by a cutting instrument, or trochar; after which, the means above-mentioned are to be used.

The cicatrices formed by these various operations, possesss (like the original ones, produced by the burn) a strong tendency to contract, which continues until the organization be definitively completed, just as with respect to the former. Hence it becomes necessary that all the means of retaining the proper position be continued long after the healing of the new wound. It is also proper to employ baths, fomentations, emollients, oily embrocations, &c. at first constantly, and afterwards only during the night; gradually discontinuing them as the patient is able to return to the proper exercise of the parts.

In burns of the second degree, the cicatrices are always without puckering and without approximation of the edges to the centre, and consequently without the great deformities which follow the severer kinds of burn. They sometimes exhibit projecting inequalities—bands, or adhesions—partial or complete occlusions of natural openings; but as these are always superficial, the operations are very simple, and without the risk of implicating important organs. The first of these deformities is removed by shaving off the eminences with a sharp bistoury, and taking care, by means of caustic and pressure, that the blemish does not recur. In the second, the parts are separated by cutting the tissue which joins them with a bistoury alone, or guided by a grooved director; or if the adhesion be loose and membranous, it may be divided with a pair of scissars—the only care requisite being not to involve any thing in the operation but the adventitious texture. The deformities resulting from the third degree of burn, do not require to be treated differently from those of the second; but much more care is required in the division of the contiguous parts, because the cicatrix is much thinner, and more risk is incurred of wounding a nerve, artery, vein, or other subjacent part. A precept which applies to cicatrices of every degree, is, that when the adhesion is very extensive (as when the arm is glued to the trunk, or the two thighs together) it ought not to be separated at one operation, as a wound of such magnitude might lead to formidable consequences: we must here proceed by portions; waiting for the healing of the first wound before we proceed.

Such are the rules by which I am guided; and those who have attended my *clinique* during many years back, have had abundant opportunities of witnessing the results. At present I shall content myself with detailing two recent cases in illustration.

Case I. — *Retraction of the fingers in consequence of a burn; adhesion to the palm of the hand: successful operation.*

An infant, two years and a half old, in good health, fell upon the fire with its hand resting on the hot coals. Notwithstanding the immediate assistance of the parents, the burn implicated the entire thickness of the dermis (constituting the fourth degree of burn). The wound occupied three-fourths of the inner surface of the hand; suppuration soon came on, and it was dressed with a liniment of lime-water and oil. By the advice of a practitioner, the fingers were maintained extended by a wooden splint. At the end of five weeks

the wound had entirely cicatrized; the apparatus was removed, and some days after the parents saw with surprise the cicatrix begin to retract, the little-finger semi-flexed, and the ring-finger beginning to be so. No attempt was made to arrest the deformity, which, at the end of eighteen months, presented the following appearance. The little-finger forceably bent in such manner that its dorsal surface was turned inwards; the first phalanx partly adherent to the palm of the hand; the ring-finger rather less flexed; the middle still less; and the fore-finger nearly free. The skin of the palm of the hand covered by an inextensible band.

The operation was thus performed:—The forearm being firmly held by assistants, the whole thickness of the cicatrix was cut across with a straight bistoury; after which, the preternatural adhesions of the fingers were destroyed. That the extension might be easier and the success more certain, three other incisions were directed perpendicularly to the inter digital spaces, and meeting the great transverse incision. But little blood was lost, and an hour after the operation the dressing was applied. A wooden palette, terminated by four divisions in the form of fingers, was fixed by the turns of a bandage on the dorsal face of the forearm and hand; each finger was separately extended, and maintained *in situ* by strips of bandage, the thumb alone remaining free. The wound was covered with linen, spread with cerate. The extension was continued during three months. Towards the end of the fourth month the child was presented at the public consultation, all the parts having resumed their natural situation and movements.

Case II.—*The Hand bound to the Forearm—Operation by transverse incisions—Description of Apparatus for effecting gradual Extension—complete Cure.*

A child, ten years of age, was brought to the Hôtel Dieu in October. The father stated, that, when two years old, the infant fell near a pan containing boiling soup; the left arm was immersed in the fluid and much burnt. Six months after, the wound was cicatrized; but the necessary precautions not having been taken, a band which was formed by the cicatrix retained the hand in a state of flexion, so that it formed nearly a right angle with the forearm. This adhesion continued undiminished. M. Dupuytren, before operating, remarked that many surgeons, both in France and England, think that such a deformity cannot be remedied without removing the adventitious band throughout its whole extent, and that cross incisions are insufficient. The latter mode, however, was here adopted. The arm was extended and held by an assistant, and the band divided transversely, at three different points, by means of a bistoury: it extended from the middle of the forearm to the palm of the hand. Had the proceeding ceased here, it would, indeed, have been imperfect; but after the incisions had been made, a mode of dressing was adopted, consisting of a sort of inflexible apparatus which accommodated itself to the rotundity of the limb, and long enough to reach to the extremities of the fingers, supposing them to be fully extended. This apparel was maintained in its place by numerous turns of bandage, a strap passing before the fingers and attached at the other extremity to the apparatus, in such manner that, by a very slight effort, the fingers and wrist could be extended as gently as might be desired, and there maintained by the strap. The pain caused by this proceeding was not very intolerable. Next and following days the strap was tightened by one degree; then by two, three, and so on, until the wrist was fully extended, which was the case at the end of two months and a half, when the child was discharged completely cured, and using the left hand almost as well as the right. I say *almost*, because the want of habit rendered it a little awkward.

Another patient, aged 15, is now in the Hôtel Dieu, presenting a deformity of the same kind. A similar method was adopted three weeks ago, with every prospect of the like success.

GLASGOW ROYAL INFIRMARY.

AMPUTATION OF THE SHOULDER-JOINT.

Mrs. R., aged 29, married, was admitted under Dr. Weir on 7th November.—Right shoulder is much swollen; tense and indistinctly fluctuating. Swelling occupies the entire upper third of arm, and is of a globular appearance. Feels a constant deep-seated pain, of a dull character, but which becomes more acute during the night. Pain is so acute in handling the limb, that its state is not so well ascertained; yet, on moving arm, head of bone appears to remain more or less fixed, as if bone were broken about two inches below joint. Integuments of shoulder are discoloured and interspersed with cicatrices, the consequence of blisters and issues. General health a good deal impaired; sleep prevented by pain; yet appetite continues pretty good, and has no appearance of hectic. Disease commenced fifteen months ago with a constant dull pain, unattended by swelling or redness. Eight months ago, after the ineffectual use of leeches and blisters, an attempt was made at reduction for a supposed dislocation of shoulder;

after which it was discovered that arm was broken. Since that time has used issues and blisters repeatedly, but without any benefit. Latterly has supported forearm in a piece of pasteboard, and retained in a sling, by which action of elbow-joint is likewise much impaired.

Nov. 13th.—A consultation being unanimous that arm should be removed at shoulder-joint, this operation was to-day performed. Two incisions were made, by beginning immediately below acromion, and extending in a slightly semilunar direction around arm to axilla. The posterior external was made first, the integuments and muscles forming posterior border of axilla being dissected from tumor backwards as far as joint, and upwards into axilla, keeping clear of the artery, which was felt beating distinctly. The anterior internal incision was then made, which divided the muscles on fore part of axilla. Two flaps, composed chiefly of integuments (the muscular substance being much wasted), were thus made, surrounding the joint, except that a small portion, where axillary artery was situated, was left uncut. The joint was then opened at posterior part, dividing the muscles and capsular ligament around the head of the bone, which was then easily dislodged from socket by bringing arm a little forward across the breast. The knife was now got between the tumor and glenoid cavity, and the axillary artery and nerves divided last, which separated the limb. The artery being at this time firmly compressed above the clavicle, not a drop of blood escaped. About an inch of acromion process was removed with the saw. The cartilage covering the glenoid cavity was also removed. The flaps were brought accurately together, and retained by two stitches, adhesive plaister, and bandage. The operation was wholly performed with a common scalpel. It occupied from ten to twelve minutes, and not more than four ounces of blood were lost. A small superficial artery, besides the axillary, required a ligature. Half an hour after operation, pulse 80, of good strength. Was ordered at this time 18 drops of the black drop. In the evening, pulse 96.

14th.—Passed a quiet night, but had very little sleep. Had a good deal of pain in wound, and complains of headache and general uneasiness; pulse 116; tongue white; is habitually costive. No stool since operation. No appetite; considerable thirst. Skin of natural temperature.

Vesp. sumt. Pil. al. c. Colocynth. ℳj.
Reptr. e. m. si opus.

16th.—Has continued pretty well these two days. Pulse yesterday, 116; to-day, 100. Complains of slight sore throat. Headache removed. Bowels have been opened by an enema.

C. M. Rept. Enem. Com.

17th.—Wound dressed. Adhesion has taken place partially, and discharge is moderate but of thin consistence. Had some sleep last night, and feels to-day pretty comfortable. Pulse 104. Enema operated well.

22d.—Wound dressed on the 19th, and again to-day. It has united throughout its whole extent, except a small portion at the upper part, and another at the lower, where ligatures are situated. Very little discharge at last dressing, and none at all to-day. Appetite much improved, and expresses herself altogether more comfortable.

It appears from a long report on the 30th November, and which it is unnecessary to copy, that she went on well until the 27th, when she was seized with profuse hæmorrhage from the uterus, and the discharge of an organized mass similar to a mole. This reduced her very much, but the wound was quite cicatrized; a few days after the ligature came away from the axillary artery, which was on the 29th, being sixteen days from the operation. The account of the appearances which the diseased parts presented is not inserted in the journal of the Infirmary, but Dr. Weir, at his clinical lecture, mentioned that the case was one of osteo-sarcoma of the humerus, which had begun in the head of the bone, and had extended about one-third along its shaft;—that the osseous structure was changed into a soft substance, resembling the medullary part of the brain. All the parts entering into the formation of the shoulder-joint were healthy, and the cartilage covering the head of the humerus had its natural white appearance. The diseased parts being completely removed, he anticipated the perfect recovery of the patient.

OXFORD MEDICAL DEGREES.

The following regulations regarding degrees in medicine have just been issued by the University of Oxford, and are to come into operation after Trinity Term, 1834.

DE TEMPORE ET EXERCITIIS REQUISITIS AD GRADUS IN MEDICINA CAPESSENDOS.

Quoniam exercitia pro Gradibus in Facultate Medicinæ præstanda hisce temporibus minime conveniunt, placuit Academiæ abrogare Statuta (scil. Tit. VI. Sect. v. Gratiarum formulas Tit. IX. Sect. iii. §. 4. Juramenti formam Tit. IX. Sect. vi. §. 2 et Tit. IX. Sect. ix. §. 4. §. 5. §. 6.) et in eorum locum nova hæc Statuta subrogare.

§. 1. *Quot anni, in studio Medicinæ ponendi, requirantur ad Gradum Baccalaurei in Medicina.*—Statutum est, quod unusquisque

antequam Baccalaurcatum in Medicina consequatur, examen publicum subeat inter eos Candidatos qui primum gradum in Artibus vel in Jure Civili petunt, et post examen illud, Medicinæ studio per triennium integrum (scil. 12 Terminos) operam dedisse teneatur.

Magistris vero in Artibus, vel Baccalaureis in Jure Civili, licebit, (si modo examen subierint infra §. 3 sancitum,) Baccalaureatum in Medicina capessere; cauto tamen nequis ad hunc gradum admittatur ante completos 28 Terminos a die matriculationis suæ computandos.

§. 2. *De Examinatione pro Gradu Baccalaurei in Medicina, et de Examinatoribus designandis, et juramento onerandis.*—Statutum est, quod qui ad Baccalaureatum in Medicina promoveri cupit, priusquam ad supplicandum pro Gratia admittatur, examen subeat.

Huic igitur rei quo melius prospiciatur, Academiæ placuit ut tres in Medicinæ Facultate publici Examinatores constituantur; scilicet, Medicinæ Professor Regius (cujus semper erit huie negotio præesse) duo itidem ex Acad. Oxon. in Medicina Doctores, a Vice-Cancellario singulis Examinationibus nominandi, et deinceps a Domo Convocationis approbandi. Quod si Professor Regius propter gravem aliquam causam absentiæ veniam a Vice-Cancellario impetraverit; alium quendam in Medicina Doctorem Vice-Cancellarius in ejus locum substituet.

Singuli autem Examinatores antequam munera sua adeant, coram Vice-Cancellario, exigente Seniore Proeuratore, juramentum præstabunt in hæc verba; viz.

Domine Doctor, tu jurabis, quod munus et officium Examinatoris publici in Facultate Medicinæ sedulo et fideliter pro virili exequeris, forma et modo per Statuta requisitis. *Resp.* Juro.

Item tu jurabis, quod, sepositis omni odio et amicitia, timore et spe, neque indigno cuivis testimonium perhibebis, neque digno denegabis. *Resp.* Juro.

Item tu jurabis, quod nullo modo revelabis suffragium quod vel ipse tuleris, vel alius quivis Examinator tulerit, de testimonio alicui perhibendo vel denegando. *Resp.* Juro.

§. 3. *De tempore, loco et modo Examinationis.*—Semel quolibet anno, videlicet Hebdomada secunda pleni Termini Trinitatis, Examinatio in Facultate Medicinæ habeatur.

Huic Examinationi liceat Examinatoribus cum consensu Vice-Cancellarii locum aliquem idoneum assignare, modo ante Examinationem habendam triduo saltem de hac re Academiam certiorem faciant.

Instituatur examen in Theoria et Praxi Medicinæ—in Anatomice—Physiologia, Pathologia, et Materia Medica—insuper in Chemia et Botanice, quatenus eæ disciplinæ Artem Medicam illustrare videantur. Examinatoribus liberum esto, quemlibet Candidatum vel in hisce universis, vel in aliqua parte harum (prout ipsis satius visum fuerit) examinare. Porro nunquam non adjiciantur veteres illi Scriptores, Hippocrates, Aretæus, Galenus et Celsus, quorum duo ad minimum in omni examine semper adhibentor.

Cujuslibet Candidati examen, partim viva voce, partim scriptis, peragatur, et quantum fieri poterit, uno decursu vel saltem sine diei intervallo, absolvatur. Omnes Examinatores uniuscujusque examini per integrum tempus intersint, nisi aliquid in scriptis præstandum sit, quo in casu unus tantummodo adesse teneatur.

Inter examinandum, aut Latino aut Anglicano Idiomate uti licebit, prout Examinatoribus magis expedire videbitur.

Peracta demum Examinatione, Examinatores de Candidatis singulis inter se judicium ferent, et quemcunque dignum invenerint, ei testimonium perhibebunt sub hac forma:

A. B. [die mensis et anni] pro gradu Baccalaurei in Medicina examinatus, prout Statuta requirunt satisfecit nobis Examinatoribus.

Ita testamur { *C. D. P. M. R.* / *E. F.* / *G. H.*

Nomina quoque eorum qui Examinatoribus satisfecerunt in Registrum peculiare inserentur penes Registrarium Universitatis, finita quaque Examinatione, adservandum.

Quod si contingat aliquem hujusmodi Testimonio indignum reperiri, licebit illi in aliqua sequente Examinatione Candidatum se iterum profiteri.

Huic Examinationi interesse licebit omnibus Magistris in Artibus, Baccalaureis in Jure Civili, et quibuslibet superiore aliquo Gradu insignitis; neenon Baccalaureis in Artibus, si modo coram Professore Regio sposponderint Medicinæ se operam daturos. Sub eadem conditione licebit Juristis et aliis nondum graduatis, qui examen pro Gradu A. B. vel J. C. B. subierint, et qui quadriennium a die Matriculationis suæ compleverint, his Examinationibus interesse.

Unusquisque Candidatus examen subiturus, Professorem Medicinæ Regium hac de re certiorem facere tenebitur decimo quarto die ad minimum ante Hebdomadam Examinationi habendæ destinatam. Quo quidem tempore, Professori in manus literas certificatorias tradendas curabit, quibus se, apud quoddam melioris notæ Nosocomium, cum morbis curandis interfuisse, tum Lecturis audiendis deligentem operam dedisse, liquido constet. Nec Professori Regio licebit, literis Certificatoriis istis a majori parte Examinatorum non

approbatis, aliquem ad examen subeundum admittere.

Cautum insuper esto ne quis se sistat examinandum, nisi qui septem annos (scil. 28 Terminos) a tempore matriculationis suæ compleverit.

§. 4. *De examinatoribus remunerandis.*—Statutum est, quod Candidatus unusquisque ante Examinationem inchoandam Professori Regio in manus deponet sex libras, ab eo, honorarii nomine, duobus reliquis Examinatoribus persolvendas. Ipse Professor feoda antiquitus imperata solus percipiat.

§. 5. *Quot anni, in studio Medicinæ ponendi, ad incipiendum in Medicina requirantur.*—Statutum est, quod qui ad Doctoratum in Medicina promoveri cupit, post Gradum Baccalaurei in Medicina susceptum, per tres annos integros studio Medicinæ incumbat, priusquam ad incipiendum in eadem Facultate admittatur.

§. 6. *Exercitium pro Gradu Doctoris in Medicina præstandum.*—Statutum est, quod Baccalaureus in Medicina priusquam ad incipiendum in eadem Facultate admittatur, dissertationem a se conscriptam de thesi quavis Medica prius a Professore Regio approbata publice intra Scholarum præcinctus coram Professore Regio recitare, eique ejusdem dissertationis exemplar, finita lectione, tradere tenebitur.

Denique ad tollendam omnem dubitationem pronunciamus quod omnes qui in Medicina inceperint, eodem suffragandi jure gaudeant, ac si in Artibus aliquando rexissent.

§. 7. *De incorporandis sive Medicinæ studiosis, sive Graduatis.*—Statutum est, quod unusquique sive Graduatus Medicina, sive studiosus, ex alia Academia hic incorporandus, priusquam in matriculam hujus Academiæ referatur, testimonia coram Vice-Cancellario exhibeat, quibus liquido pateat eum exercitia præstitisse omnia, quæ in sua Academia nondum Graduati pro Baccalaureatu in Artibus præstare tenentur. Cautum sit insuper nequis in Medicina Graduatus incorporetur, nisi examen prius subierit, tempus compleverit, et reliqua præstiterit omnia, quæ per præsens hoc Statutum requiruntur.

SECTIO III.

§. 4. *Formulæ speciales Gratiarum ad singulos pertinentium. Pro Gradu Baccalaurei in Medicina.*—Supplicat, &c. A. B. Magister [vel Baccalaureus] Facultatis Artium, [vel Baccalaureus in Jure Civili, vel Medicinæ studiosus,] e Coll. [vel Aula] M. quatenus 28 Terminos a die matriculationis suæ compleverit; per triennium Medicinæ operam dederit, examen subierit, et reliqua omnia præstiterit, quæ per Statuta requiruntur, (nisi quatenus secum dispensatum fuerit,) ut hæc sibi sufficiant, quo admittatur ad lectionem cujuslibet libri Aphorismorum Hippocratis.

Pro Gradu Inceptoris in Medicina.—Supplicat, &c. A. B. Medicinæ Baccalaureus, e Collegio [vel Aula] N. quatenus post susceptum Gradum Baccalaurei in Medicina, tres annos in studio Medicinæ posuerit; dissertationem scripserit et coram Professore recitaverit, et reliqua omnia præstiterit, quæ per Statuta requiruntur, (nisi quatenus secum dispensatum fuerit,) ut hæc sibi sufficiant ad incipiendum in eadem Facultate.

SECTIO IX.

§. 4. *De Qualitate eorum, qui ad Praxin in Medicina licentiandi sunt.*—Statutum est, quod Doctor quilibet in Medicina, post inaugurationem seu admissionem suam, practicare licite poterit in omnia medicandi genere. Alius vero nemo in Medicina publice practicare Oxoniæ permittatur, nisi Gradum Baccalaurei in Medicina susceperit, et a Cancellario sive ejus Commissario, et Congregatione Magistrorum Regentium, ad practicandum more consueto admissus fuerit. Chirurgiam vero nullus exerceat, intra præeinctum Universitatis, nisi licentia a Cancellario sive Vice-Cancellario impetrata.

Quod si quis secus præsumserit, non solum ab ulteriore promotione repellatur, et privilegiis Universitatis privetur; sed etiam (si monitus non desistat) sicut perturbator pacis puniatur.

§. 5. *Formula petendi Licentiam ad practicandum in Medicina.*—Pro qualitate personæ supplicantis, in Gratia exprimantur, quæ ad hujusmodi licentiam necessario requiruntur, sub hac formula: Supplicat, &c. A. B. e Coll. [vel Aula] N., quatenus in hac Universitate Gradum Baccalaurei in Medicina susceperit, et chirographo vel professoris et unius alterius Doctoris in Medicina, vel trium quorumcunque Doctorum in Medicina, in Universitate residentium, approbatus fuerit; et reliqua præstiterit omnia, quæ per Statuta requiruntur, ut hæc sibi sufficiant ad practicandum in eadem Facultate per universam Angliam.

Qua Gratia concessa et pronunciata, prout aliæ solent, Literæ etiam Testimoniales, de eadem fient, et (eodum modo quo testimoniales licentiæ ad prædicandum in Domo Congregationis ratæ habebantur) sigilla publico Universitatis munientur.

§ 6. *Formula Literarum Testimonialium.*—Cancellarius, Magistri, et Scholares Universitatis Oxon. dilecto nobis in Christo A. B. Baccalaureo in Medicina e Coll. [vel Aula] N. intra Universitatem prædictam, salutem in Domino sempiternam. Cum omnia nostra studia, consilia, et actiones ad Dei gloriam et fratrum salutem referri debeant; cumque Medicina ad hæc, inter reliquas Faeultates, plurimum conferat; hinc est, quod nos Cancellarius, Magistri, et Scholares antedicti (pro ea opinione, quam de scientia tua, vitæque

ae morum integritate, habemus) liberam tibi, tenore præsentium, concedimus potestatem et facultatem practicandi in Medicina, et ea omnia faciendi, quæ ad eam spectant Facultatem, ubivis per universum Angliæ regnum, in perpetuum duraturum. Nos etiam Cancellarius, Magistri, et Scholares antedicti, testamur præfatum A. B. juramentum de primatu Regiæ Majestatis suscepisse, &c. prout supra, in forma licentiæ ad publice concionandum.

Placuit Academiæ ut hæc Statuta vim et vigorem suum non obtineant ante Terminum Trinit. 1834.

Interim antiqua exercitia rata pemaneant.

De Statutis his rogandis consenserunt Collegiorum et Aularum Præfecti, et, re mature perpensa, convenerunt in Terminos, die vicesimo sexto mensis Novembris: relata sunt in Domo Congregationis die vicesimo octavo mensis Novembris, juxta statuti in ea parte exigentiam, triduo ante Convocationem habendam; tandem in Convocatione publicata et confirmata die secundo mensis Decembris, anno Domini 1833.

ST. ANDREW'S MEDICAL DIPLOMAS.

The following regulations for granting degrees in medicine have recently been adopted by the University of St. Andrew's.

Upon a motion made at a previous meeting, the Senatus Academicus took anew under their serious consideration the mode of conferring degrees in medicine and surgery; and with a view of requiring from candidates for that honourable distinction a course of study calculated to prepare for the full and enlightened discharge of their professional duties, and of affording to the public the most ample security that no degree will be conferred until it has been ascertained, by minute and scrupulous examination, conducted by the Professor of Medicine, in conjunction with other distinguished members of the medical profession, being resident Fellows of the Royal Colleges of Physicians, or Surgeons, in London, Edinburgh, Glasgow, Aberdeen, or Dublin, that the candidates have suitably profited by attending the prescribed classes and hospitals, and are in every respect qualified to practise with advantage to the community, adopted the following Regulations; which they agreed to publish in all the medical journals of Great Britain, and to communicate to the highest medical authorities:—

1. No candidate shall be admitted to examination till he has subscribed a declaration that he is twenty-one years of age; and has produced satisfactory evidence that he is of unexceptionable moral character.

2. The candidate, if he be not in possession of the degree of A.M., must produce certificates of having had a liberal and classical education, and be ready to undergo an examination as to his proficiency in the Latin language.

3. The candidate must produce certificates that he has regularly attended lectures delivered by Professors in some University, or by resident Fellows of the Royal Colleges of Physicians, or Surgeons, of London, Edinburgh, Glasgow, Aberdeen, or Dublin, for at least *four complete sessions*, during *four years*, on the following branches:—

1. Anatomy.
2. Practical Anatomy.
3. Chemistry.
4. Theory of Physic, or Physiology.
5. Materica Medica and Pharmacy.
6. Principles of Pathology and Practice of Physic.
7. Surgery.—(Each of the above courses to be of six months' duration.)
8. Practical Chemistry.
9. Midwifery, and Diseases of Women and Children. (three months' courses.)
10. An apprenticeship, or six months' attendance in the shop of an apothecary, or in the laboratory of a public Hospital or Dispensary.
11. Attendance at a public Hospital, containing not less than eighty beds, for at least twelve months.

For degrees in medicine—Clinical Medicine; for degrees in surgery—Clinical Surgery.

Two three months' courses of either, to be considered equivalent to one six months' course.

These regulations will be invariably observed, except when the candidates are possessed of a surgeon's diploma, from London, Edinburgh, Glasgow, Aberdeen, or Dublin; have been in regular practice previous to the year 1830, or have served as medical officers in his Majesty's army, navy, or East India Company's service: in which cases, three years' attendance on the above courses will be sustained.

The Senatus Academicus have, in the meantime, appointed as conjunct examinators with the Professor of Medicine—

Robert Liston, Esq., Fellow of the Royal College of Surgeons, Edinburgh, Surgeon to the Royal Infirmary, and Lecturer on Surgery.

J. A. Robertson, M.D. Fellow of the Royal College of Surgeons, Edinburgh, and Lecturer on Surgery and Materia Medica.

J. Mackintosh, M.D. Fellow of the Royal College of Surgeons, Edinburgh, and Lecturer on Midwifery and Practice of Medicine.

Alexander Lizars, Esq. Fellow of

the Royal College of Surgeons, Edinburgh, and Lecturer on Anatomy.

William Gregory, M.D. Fellow of the Royal College of Physicians, Edinburgh, and Lecturer on Chemistry.

Any three of whom, along with the Professor of Medicine in this University, to be a quorum.

It is resolved that there shall be three periods during the year for graduation—viz. the last Tuesday in April, the first Tuesday in August, and the last Tuesday in December.

Every candidate for these degrees must communicate with the Professor of Medicine personally, or by letter, and furnish him with a list of the certificates he intends to produce, fourteen days before the stated period of examination, to prevent disappointment, delay, and expense. Each candidate, after he shall have afforded sufficient evidence to the University as to his course of study, and paid the fee of graduation, will be informed of the time and place of his examination; which must be conducted before the Senatus Academicus, or a committee of that body.

The whole proceedings shall be submitted to the consideration of the Senatus Academicus by the examinators. Should the University be satisfied, the degree will be conferred on the candidate, by the Rector, in the Hall of the Public Library of the University, and the diploma will be signed by the members of the University and the examinators. Should any candidate be found unqualified, he will be remitted to his studies till the next period for conferring degrees; and when he again presents himself, he will be required to produce satisfactory evidence that he has been diligently engaged, during the interval, in improving himself, and, if possible, attending additional lectures. In the event of being remitted to his studies, he shall forfeit one-third of the deposit money; which, however, will be accounted for to him, when he passes his examination successfully at a subsequent trial.

St. Andrew's, Dec. 9, 1833.

MEDICO-CHIRURGICAL SOCIETY.

Nov. 26, 1833.

MR. HOWSHIP ON THE ŒSTRUS HUMANUS.

An interesting paper, by Mr. Howship, on the subject of the *Œstrus Humanus*, was read. It contained the relation of two cases:—

The first was that of a soldier in Surinam, who was visited, August, 1806, by Mr. Gill, Surgeon of the 64th regiment, for a large boil on the back, near the scapula. Compression ejected the larva, of a dirty brown colour, and answering the description of that found in the second case. The out-post, where the case occurred, is on a sand-bank, closely hemmed in by the bush (wood). The man appeared aware of the nature of the swelling, as he said there was a worm in his boil.

The second case was in a young man, at Santa Anna, in Columbia. He applied to Mr. Treherne for an inflammatory swelling, of several months existence, on the scrotum, with a small ulcerated opening, from which a living larva was pressed out, and fell to the ground. It was active, and moved to and fro for some time afterwards. It was more than an inch long, broad in proportion, composed of nine or ten rings, and of a brown colour.

Two very beautiful drawings, made by a distinguished artist in this line, accompanied the paper, which was rendered more interesting by Mr. Howship exhibiting at a subsequent meeting the larva itself to the society.

The annexed description of the larva, from the pen of Mr. Curtis, chiefly interesting to those engaged in the pursuits of natural history, leads to the inference, that the insect in question forms a new species of œstrus.

To determine the exact characters of the fly this larva produces, Mr. Curtis observes, that if at any time a full-grown larva should be obtained, a garden-pot, filled with light moist earth, should be taken, and the grub, placed on the top, would soon bury itself, and change to a pupa or chrysalis. The pot should be set in a saucer, with water, to keep the earth moist, a state essential to produce the fly. To prevent its escape when hatched, a piece of gause or muslin must be tied over the top, and the fly, when produced, must be allowed to live for some hours after its escape from the pupa, that the wings may dry, and the parts assume their proper form and colour.

These concluding remarks appear to be most important, as they may enable some future observer, interested in researches of this kind, to complete what remains to be determined regarding the natural history of the Œstrus humanus.

ROYAL SOCIETY.

Physiology of the Nerves of Sensation. By J. Bishop, Esq.

The influence of the fifth pair of nerves on the functions of sight, smell, and taste, is a subject which has lately occupied the attention of physiologists. Many experiments have been made on living animals with a view to its elucidation; but these experiments have never led to any satisfactory conclusion. Considerable light

has been thrown upon this obscure question by the phenomena attending a case of paralysis of the fifth pair of nerves, which occurred in the author's practice, and of which he gives the history in detail, after quoting the account given by Magendie of his experiments and speculations respecting the functions of these nerves.

The lady who was the subject of these observations had been affected with total insensibility of the left side of the face and head, together with strabismus, accompanied with double vision; but the powers of voluntary motion of all these parts remained entire. The globe of the left eye was quite insensible to touch, though it retained the power of vision unimpaired, except that for some time previous to death it had lost the faculty of distinguishing colours. The left nostril received no impressions from the most irritating stimulants, such as snuff or ammonia; yet the sense of smelling continued unimpaired. The left side of the tongue was quite insensible to impressions both of touch and of taste. On examining the brain after death, a scirrhous tumor was found lying on the inner surface of the sphenoid bone, extending laterally to the foramen auditorium internum, and resting posteriorly on the pons varolii, which was slightly ulcerated. The tumor had completely obliterated the foramina for the exit of the three branches of the fifth pair of nerves. This case proves, therefore, that, contrary to the opinion of Magendie, the senses of smell and vision can be exercised independently of the fifth pair of nerves; and that the sense of taste is altogether derived from that nerve; and corroborates the views of Sir Charles Bell on this part of physiology.

On the Comparative Osteological Forms in the Adult European Male and Female of the Human Species. By WALTER ADAM, M.D.

With a view to the future investigation of the osteological development of the human race, the author gives, in the present paper, the results of a great number of measurements, which he has very carefully made, of the dimensions or the different bones composing the adult human skeleton. The male bones examined were those in the collection of Dr. Monro; the female bones were furnished by Dr. Hamilton. The author was anxious to fix on some one dimension in the skeleton which might be taken as the standard of all the measurements: and finding that no bone of the trunk or limbs possessed the requisite characters for that purpose, he sought for it in the cranium; and the result of an extensive series of observations led him to adopt as the standard of measure the distance between the prolongations of the zygomatic ridges, immediately over the meatus auditorius externus, as being that dimension which was less liable to variation than any other of the human cranium. This line he denominates the *auricular transverse*; and, adopting a scale of which the unit is the 14th part of this line, being generally about the third of an inch, he states at length, in multiples of this unit, the dimensions, in different directions, of almost every bone in the skeleton; noting more especially the differences that occur in those of the two sexes. Of these measurements, which are given in much detail, and in many instances arranged in a tabular form, it is impossible to give any abridgment. The conclusion he deduces from his inquiry is, that every bone in the body exhibits certain modifications, according to the sex of the individual.

LITERARY INTELLIGENCE.

Professor Grant, of the London University, is about to publish Outlines of Comparative Anatomy, in one octavo volume, with illustrative engravings.

NEW MEDICAL WORK.

The Anatomy of the Human Bones, by Sharpnell. Part I. Royal folio, 5s. sewed.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Dec.* 17, 1833.

Abscess	4	Hæmorrhage	1
Age and Debility	36	Heart, diseased	1
Apoplexy	5	Hooping-Cough	3
Asthma	7	Inflammation	20
Cancer	1	Bowels & Stomach	6
Childbirth	2	Brain	4
Consumption	57	Lungs and Pleura	7
Convulsions	19	Liver, diseased	3
Dentition or Teething	13	Measles	18
Dropsy	7	Mortification	3
Dropsy on the Brain	14	Paralysis	2
Dropsy on the Chest	1	Rheumatism	1
Erysipelas	1	Small-Pox	11
Fever	3	Spasms	1
Fever, Scarlet	19		
Fever, Typhus	1	Stillborn	13

METEOROLOGICAL JOURNAL.

Dec. 1833.	THERMOMETER.		BAROMETER.	
Thursday . 12	from 35	to 44	29·57	to 29·67
Friday . . 13	31	41	29·74	29·84
Saturday . 14	36	47	29·95	30·04
Sunday . . 15	39	49	29·98	29·91
Monday . . 16	42	56	29·73	29·42
Tuesday . . 17	48	53	29·37	29·30
Wednesday 18	49	56	29·26	29·67

Wind S.W. and N.W., the former prevailing.

The three first days generally clear; otherwise cloudy, with frequent rain.

Rain fallen, ·1 of an inch.

CHARLES HENRY ADAMS.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 28, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XII.

GENERATION.

Obscurity in which the subject is involved.—Although in different ages men of the most commanding and cultivated talent have laboured with well-directed ingenuity and perseverance to elucidate that great action of nature, reproduction—it still must be acknowledged that there is no function of the body less understood, nor any part of philosophy, indeed, more obscure, than that which forms the subject of our present consideration. Yet the researches of such men as Harvey, De Graaf, Spallanzani, Leeuwenoeck, Haller, Hunter, and Haighton, could scarcely fail to produce fruits even out of the most barren soil; and consequently we are in possession of many facts noted by them; and have also a great number of hypotheses, by which attempts have been made to explain the doctrine of generation. Many of these, merely the result of fanciful speculation, have fallen almost at the moment of their birth; others, founded upon observation and rational deduction, have by turns possessed the minds of men, and ruled, the prevalent opinions of the day. From such we must endeavour to collect the most probable, and divest them of the specious sophistry that envelopes them.

The only circumstance essential to generation, because the only point of agreement between the various methods by which reproduction is effected, consists in every living body being connected, during the first stage of its sensible existence with a larger body of the same species as itself, of which it forms a part, and from whose fluids it derives nourishment for a definite length of time. The subsequent separation constitutes its birth. From this period it assumes an independent existence; and,—containing within its own system those organs necessary for the continuance of the vital principle, and the assimilation of nutritious matter,—it is capable of supporting life without the intervention of the parent, to whose body it had hitherto been attached.

This existence, however, is destined to have an end; and death falls sooner or later upon all organized nature: some genera scarcely count an hour's space, while others outlive the fall of many human generations. Thus no moment flies past us without being marked by the destruction of some created being. But notwithstanding individuals are constantly perishing, the species survives; new creatures arise to fill the blank occasioned by decay; and the chain remains always entire, though every link be broken in succession.

Spontaneous generation.—Fruitful as nature is—benificent in all her operations, and abundantly careful for the preservation of each species—still in no instance does she call unorganized matter into life. The doctrine of spontaneous, or equivocal generation, was entirely subverted by various experiments, performed about the end of the seventeenth and beginning of the eighteenth century, by Redi, and other Italian physiologists. That such a belief was general previously to this time, even among men of science, is evident from the following quotations:—Fabricius begins his treatise "De Formatione Ovi," with these words: "Animalium autem fœtus, alius ex ovo, alius ex semine, alius ex putri gignitur;" and Harvey, among other observations of similar import, has, "sive ab

aliis generantibus (animalia) proveniunt, sive sponte, aut ex putredine nascuntur."

Deductions from analogy.—Facts have been adduced from each of the three kingdoms, into which all the objects in nature are usually divided, to account for the manner by which generation occurs. The vegetable, indeed, may furnish us with something important towards the attainment of our object; but as the mineral can only increase by accretion, if, indeed, it grows at all, we should gain but little by dwelling on its properties; for the fossil world is made up of masses of mere lifeless matter, subject—for any alteration in their constituent parts, enlargement of bulk, divisibility, or destruction—to accident, and the laws of chemistry alone; increasing, perhaps, occasionally, by the mechanical addition of extraneous substances, or by chemical attraction, but neither fed by nourishment taken into an organized structure, nor capable of producing their kind, nor subject to decay from irregularity in, or the continuance of, internal functions.

In the vegetable kingdom impregnation is effected by the sprinkling of a fecundating dust — the pollen — secreted by the vessels of the stamens, or male parts of the flower, upon the pistils, or female organs: in this way a prolific seed is produced. The species may be continued either by sowing the fecundated seed in the earth, or by planting a slip of the tree itself; in either instance the subsequent growth takes place in the same manner; additional matter is secreted by the vessels of the plant, adding to the bulk of every part; and fresh members are produced by the unfolding of the buds. There are many animals in which generation is effected by shoots, and which sprout as plants do when rooted in the ground. The polype, and sea anemone, multiply in this manner; some worms are also propagated by a division of their bodies. This mode of generation in animals requires no distinction of sex, no copulation, nor any particular organ. Other modes of generation are accomplished in appropriate organs; the germs appear in a particular part of the body, and the assistance of certain operations is required for their further development. These operations constitute fecundation, and require the existence of sexual parts:—the sexual parts may either be distinct to each, or united in the same individual. The office of the male sex is that of furnishing the fecundating or seminal liquor; but the manner in which it contributes to the development of the germ is still buried in the deepest obscurity. Some physiologists, taking the mammalia as their standard, suppose that the new being is created by a mixture of the male and female seminal fluid. Hippocrates was the first propounder of this doctrine, which was warmly supported by Empedocles, and has gained credence with the majority of mankind since the earliest dawn of science. Others that it pre-exists in the male semen, and that the female only furnishes it with an abode and nourishment; of this notion Diogenes, and most of the members of the Stoic academy, were staunch advocates; and in later days the theory has been revived by Leeuwenhoeck and his followers. Others, again, consulting the analogy of the lower classes of animals and plants, conclude that the germ pre-exists in all females, and that the fecundating liquor is a stimulus which bestows on a prepared ovum independent life, by awakening it, as it were, from a species of lethargy in which it would otherwise have constantly remained. The experiments of Haller and Bonnet were designed to establish this doctrine.

Varieties in the combination of sexes.—The combination of sexes and mode of fecundation are subject to great variety. In some instances both sexes are united in the same individual, and the animal impregnates itself, as is the case with regard to the echinus, or sea urchin. In others, although both sexes are united in the same individual, an act of copulation is required with another individual of the same species, when each animal impregnates the other, and at the same time becomes itself impregnated; this is the case with the leech, several worms, and snails; both these are considered true hermaphrodites. In the remainder of the animal kingdom one sex alone belongs to each individual. It has been lately stated, indeed, that some microscopic animals require a combination of three individuals before fecundation can be effected; but for the truth of this assertion I will not vouch.

Variations in the effect of a single copulation.—The effect of a single copulation varies in degree; it usually fecundates one generation of offspring only; but in some insects many successive generations can be produced by one sexual connexion; and all the individuals thus called into existence possess the power of propagating their species without the aid of the male. Bonnet and Trembley, for instance, found that in the aphis, or plant louse, the species could be continued through ten generations from one copulation. In the experiments made with the view of ascertaining these extraordinary facts, an impregnated female was separated from her kind; each of her offspring were in like manner kept apart: they were all discovered to be females, and, although single, were prolific. The same separation was continued in respect to all subsequent ova;

and for ten generations none but females were produced, who in their turn brought forth young, without any communication with the male being allowed. It was not till the eleventh generation that any male animals appeared; and then, as though the previously imbibed power was worn out, a fresh copulation was required for the rise of a new family.

Oviparous, viviparous, and ovo-viviparous generation.—After the germ has been impregnated, it remains in some races a short time within the body, and is excluded in an imperfect state; this happens with birds, some reptiles, and most insects, and is called *oviparous* generation. Again, a very large proportion of the oviparous class of animals expel the germ before fecundation, and the male impregnates it after it is entirely detached from its mother's system. In other cases it is retained within the body of its parent, increasing in size and power, and is expelled a perfect animal, able to extract nourishment from extraneous sources; this is termed *viviparous* generation, and is exemplified in all the mammalia. In a third kind of animals, the ovum, after being fecundated and detached from the ovarium, is transmitted to the uterus of the mother, where it remains in the form of an egg until the contained germ is developed and hatched; it is then expelled from the parent altogether; these are denominated *false viviparous*, or *ovo-viviparous*, animals. The shark, with some other fishes, and the viper, afford proofs of this process.

Diversities in the mode of fecundation.—In man, and all the higher classes of created beings, actual contact of the parts of generation is necessary to conception. In many even of the sexual animals this operation is not requisite: most of the male fishes impregnate the ova after they have passed from the body of the female; but there are many even of these that require copulation—such as the whale, shark, and dog-fish. In some of the amphibia, as the frog—in whom also the germ may be recognized in the ovum before fecundation—the bodies of the parents, though not the parts of generation, are in positive contact. The seminal liquor of the male distils over the person of the female while in the act of expelling the ova, and impregnation results. Other reptiles which may be considered amphibious, such as the snake and lizard, require actual copulation before the ova can be fecundated. Such a diversity is there in the operations of nature.

Production of Mules.—One of the most curious phenomena attendant upon generation, is the production of the hybrid animal, or mule; by which term is meant a creature the offspring of parents belonging to different species. Hybrid formations are most commonly observed in plants. They are also not unfrequent among insects; occasionally met with in the smaller birds, and very rarely in quadrupeds. A productive connexion, however, between two animals of different species, can only occur in a very few instances. Nature, indeed, seems to shudder at the idea of promiscuous copulation, and has placed a barrier beyond which it is impossible to pass. Had this provision not been adopted, every original species would have been soon lost, and the earth would be tenanted by a multitude of non-descript beings; each partaking, in a greater or less degree, of the external form, and internal disposition, formerly appertaining to each individual kind. Apparently with the same intent, the Great Author of nature has formed the mules themselves incapable of generation, thereby continuing each species distinct, and preventing a multiplication of the mixed races. So almost universal is this natural incapacity, that Buffon, who paid much attention to the subject, could only discover one mule, the produce of the horse and ass, to which the function of generation was permitted: this he found in St. Domingo; and Smellie, the translator of his works, found another in the north of Scotland. But these instances must be regarded more as exceptions to the general rule than as an argument against it.

The division of animals into viviparous and oviparous refuted by the ovarian system.—The division of animals into the two sweeping classes of viviparous and oviparous, upon a superficial view, appears perfectly natural and faultless; but since the prevalence of the ovarian system, or that doctrine which teaches that all animals, in fact, proceed from germs, or *ova*, as they have been called, formed in the ovarium, the propriety of the arrangement has been much questioned. Again: the knowledge of the fact that some reptiles are both oviparous and viviparous, has considerably shaken the distinction, when regarded in a scientific light. Of this phenomenon we have an instance in the common snake of England. This reptile generates twice in the year—in the autumn bringing forth the young alive, in the spring producing eggs. According to Dr. James R. Johnson, the hirudo vulgaris is both oviparous and vivaparous. He likewise states that the aphis, and also the wood-louse, are oviparous in some situations and seasons, and viviparous in others; and that all these animals may be made to bring forth either eggs or live young at pleasure, by keeping them in a particular temperature, and treating them in a particular manner.

Information derived from examining the eggs

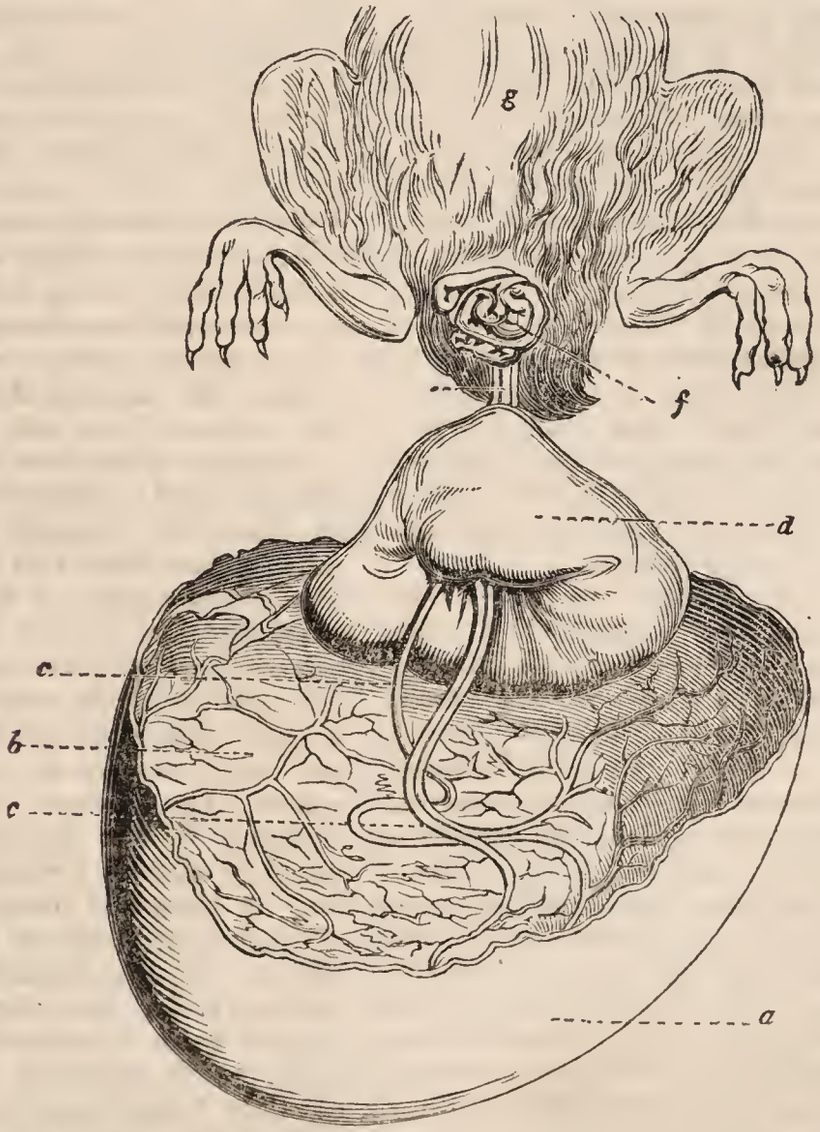
of fowls.—It has generally been the custom, in elucidating the subject of generation, to examine the eggs of fowls in different stages, from the first appearance of organization, until the time when the chick breaks forth from its confinement and enters upon a more perfect state of existence. As we shall probably derive advantage from employing a few minutes in adverting to these changes, I trust you will excuse the digression. The phenomena produced by incubation, indeed, are so interesting, on account of their exhibiting, in a palpable form, the progress of fœtal existence, that they have been studied by almost every respectable physiologist. Writings have been left on this subject by Aristotle, Hippocrates, Fabricius ab Aquapendente, Harvey, Malpighi, Haller, Hunter, Blumenbach, and many others. It is a fact undeniably established, that hen birds of almost every kind, even although they be kept alone, and never allowed connexion with the cock, will, during the summer, produce eggs, to all external appearance perfect. Such eggs are similar in size to those which have received the vivifying principle during the act of impregnation; but upon the application of heat, they putrefy, instead of producing a chick. Aristotle and Harvey relate that many birds can be made to lay eggs by mere titillation. Blumenbach and Sir Everard Home go even farther: they have revived the idea which Kerckring formerly entertained—that in virgin animals, ova are constantly growing to maturity in succession; and, during the time of heat, are imperceptibly detached from the ovarium by the spontaneous action of the fimbriæ of the fallopian tube; that they are discharged into the cavity of the tube, and perish for want of the stimulus afforded by the male semen:—that the same also occurs in the human subject.

Another circumstance worthy of attention is, that one copulation is sufficient to render fruitful all the mature eggs which are contained within the hen's body; so that if a common hen, during the spring, be allowed to receive the cock but once, and be afterwards separated from him, she will continue to lay eggs, to the number of twelve or more, one on each, or every second day, and every individual egg may produce a chick; an infallible proof that they have all been impregnated. But in this instance we must recollect, that although all the eggs are not laid on the same day, still there is but one generation fecundated, and therefore that the hen bird must only be considered a multiparient animal, as the sow, bitch, or any other. This is far different from the case of the aphis which I have before mentioned, where one copulation has frequently fecundated ten distinct generations.

The ovary, which in the fowl has the appearance of a bunch of grapes, contains a large number of ova, of different sizes, from that of a walnut to a mustard seed, consisting principally of the yolk; the most mature of these become impregnated, and pass one by one into the oviduct or uterus, where they acquire the other parts, become more perfectly formed, and are ultimately expelled through the cloaca. At the time of expulsion, they consist of the shell, which is brittle and porous; a membrane, separable into two or more layers, immediately within, and closely adhering to the shell, called the *external* membrane—the *albumen*, or white—and the yolk, or *vitellus*, surrounded by a very thin but dense membrane of its own. On the upper surface of the yolk a small white speck is apparent, called the *cicatricula*, supposed by Harvey to be the rudiment of the future bird. More modern observation, however, has proved that the embryo is not formed within the cicatricula, but close beside it—in the *amnios*—which becomes visible during the hen's sitting; and that the cicatricula soon disappears. Around this latter body there are two or three circles, called the *halones*, the use of which has never been explained; from each end of the yolk a knotty albuminous cord, named the *chalazæ*,—or vulgarly, the treddle,—is extended to the extremities of the egg, so that the yolk, being lighter than the white, always floats on the surface, while the egg is lying on its side, but is prevented from rising to either end by the chalazæ acting as restraining ligaments; the amnios, therefore, floating on the surface of the yolk, is always nearest to the body of the fowl when she is sitting, the shell and membranes only intervening; so that the warmth derived from the mother acts with full force upon the minute organization of the fœtus. It is remarkable, also, that at the large end of the egg the layers of the external membrane are separated from each other, and contain a small portion of air, by chemical analysis found exactly to resemble the atmosphere. The quantity of gas increases considerably during incubation, and is supposed to afford a constant supply of fresh air, by means of absorption, through the shell, for purifying the blood of the fœtal chick. Animal warmth is not absolutely necessary for bringing to maturity the vivified germ contained within the egg; it is merely requisite that a steady and constant temperature be applied, of about 104° of Fahrenheit's thermometer, in a situation where the external air can be admitted. The ostrich, it is well known, deposits her eggs, just below the surface,

among the loose sand in the arid deserts of Africa; and the natural heat is sufficient to set in motion the dormant spring of life: while in some countries, particularly Egypt, hatching is entirely an artificial process, conducted in ovens built expressly for the purpose; and the proprietors obtain a livelihood by superintending the process. They calculate that in this mode they lose one-third of all the eggs put into the ovens; and guarantee to the owner the remaining proportion of chickens.

We shall proceed to notice, briefly, the changes which take place during incubation, in the egg of a common fowl. At the end of twelve hours, the cicatricula and halones have increased, and near the cicatricula a small shining spot may be observed, which is the amnios, and encloses the fœtus. After twenty-four hours the chick first becomes visible within the amonios; it appears gelatinous, formed of two oval bodies, joined together in the centre, the largest of which is the head. At the end of the second day, the first appearance of red blood is seen on the surface of the yolk bag;—a series of red points is discerned, which form vessels, and become connected with the chick by larger trunks. The trunk of all these veins join the vena portæ, while the arteries, which ramify upon the yolk bag, arise from the mesenteric. At the commencement of the third day, the cicatricula and halones, which had hitherto increased, begin to disappear, and the heart is first visible; at this time the spine becomes bent into a curve, and the eyes may be seen. At the end of the third day a vascular membrane begins to form about the navel, and increases on the following days with such rapidity, that during the latter half of incubation it extends throughout nearly the whole inner surface of the shell, within the external membrane. This is the chorion, and seems to supply the place of lungs to the fœtus. At the end of the fourth day the vessels on the yolk bag have so much increased, as to cover half its surface; at this time the limbs appear. Voluntary motion is observed on the sixth day, and ossification commences on the ninth. On the fourteenth the feathers are first seen. On the outside of the umbilical sheath there are some folds of the intestines, with which the



A, the external surface of the broken shell—B, the chorion within the external membrane of the shell, on which are seen ramifying the branches of CC, the umbilical arteries—D, the yolk bag attached to the body by E, the ductus vitello-intestinalis, by the side of which are observed, running down, the umbilical arteries, on their emerging from the body—F, folds of the intestine protruding at the umbilicus—G, the body of the bird.

yolk bag is connected by a short process, being a continuation of the alimentary canal, called *ductus vitello-intestinalis.* On the seventeenth day the arteries of the chorion are so much enlarged as to be capable of receiving size injection. On the nineteenth the chick can utter sounds, and two-thirds of the yolk bag are found within the abdomen. On the twentieth all the yolk bag has entered the abdomen, which closes upon it. On the twenty-first the chick breaks its prison, and enters upon a second life. These two preparations demonstrate, in a clear manner, a part of these changes. The first is the chick of a turkey—whose period of incubation is thirty days—at the beginning of the fourth week, drawn out of the shell. The arteries of the chorion are injected with quicksilver.

In the course of incubation the white is constantly diminishing, while the quantity of air contained in the shell is much increased, and becomes diffused within the external membrane, all around, except at the small end, affording a very large surface in close proximity to the chorion. It is worthy of remark, that if the shell be varnished the chick dies; and from this we infer that the blood circulating over the chorion is altered by its exposure to the atmospheric air contained within the shell. Death will in the same manner occur if the parent be too assiduous in sitting; and for this reason, persons who have the management of fowls never allow a hen to be fed upon the nest. There can be no doubt, also, that the humours of the egg furnish nourishment to the fœtus;—the white, which decreases in the same ratio as the fœtus grows, feeding it while within the egg;—and the yolk, which is taken into its abdomen just before it breaks the shell, sustaining it after being hatched, until it is strong enough to digest such extraneous food as it can find: so that there is afforded to the fœtal chick a nutrient fluid for its support, which may be likened to the milk of the mammalia, until such time as it can convert and assimilate grain. It has been a point of dispute whether the yolk-bag entered the intestinal canal, or merely lodged within the abdominal cavity, until its contents were consumed. Blumenbach says he never discovered any true yolk in the intestines: he thinks, therefore, the bag is only received into the cavity of the abdomen, and that the vessels ramifying on its inner surface themselves absorb the nutritious matter, and carry it, by means of the ductus vitello-intestinalis, into the system of the chick. A fortnight after it has quitted the shell the yolk is entirely consumed; and from this time the only remaining trace is a kind of cicatrix on the surface of the intestine. This preparation of a common fowl, two days before being hatched, shews the mode in which the yolk-bag is received into the abdomen, through the dilated umbilicus.

A, the yolk bag passing into the abdomen at B, the umbilicus—C, the body of the bird.

We shall proceed to discuss the theories of generation at our next meeting.

ON DENTITION;

WITH AN

ATTEMPT TO EXHIBIT THE OCCASIONAL PRESENCE OF CERTAIN DISEASED CONDITIONS OF THE BODY,

As connected with its Irregular States.

By Dr. Ashburner.

[Continued from page 436.]

Those physicians who are led by the line of their practice to treat the ailments of women, should be aware of the fact that anxiety or grief is apt sometimes to be attended by irritation in the neck of the womb, and a discharge of muco-albuminous matter, accompanied by pain in the back and some prolapsus. This condition I have seen concomitant with pain in the fauces, extending to the roof of the mouth and round the alveolar arch. In other cases, grief and anxiety are attended by a

marked expression of countenance, a tightly-closed jaw, and pain in the fauces, nostrils, and around the teeth.

A highly-respectable and worthy person having been observed by me to evince very keen feeling, though his good principles enabled him to command them to a certain extent, was requested to supply me with a note of his case; and as it is illustrative of the point under discussion, he has been obliging enough to allow me to subjoin it. He says, "From my childhood I have been what is commonly called a nervous subject; and when about fifteen years old, suffered severely with headache. Up to twenty-two years, I was of a very confined habit of body; at which time, changing my residence from the east of London to west, the state of my bowels suddenly changed, and I suffered severely from diarrhœa, which continued, more or less, for three years. I then married, and being more settled, found myself better; but at the end of a year, some circumstances occurring that caused much anxiety of mind, the diarrhœa returned in an aggravated form, and I consulted several of the faculty without effect. At length it abated, but ever since (a period of more than twenty years) I have been much troubled with my bowels, which never act sufficiently without the aid of medicine. At about thirty-nine, I had a sudden attack of pain in my left temple, which I believe to be tic douloureux. I suffered dreadfully for a fortnight, when the pain subsided. I continue to have attacks at uncertain intervals, more particularly if my mind be much disturbed. This complaint will sometimes yield to medicine, but the best remedy I find is a blister, which I have sometimes kept open for three weeks; but from my nerves having been latterly much shaken, I cannot bear the irritation of this remedy now for so long a period.

"At forty-two years of age, being under great anxiety of mind, in consequence of my son's dangerous illness, I found that my teeth in the lower jaw were so tender (as I at first supposed from cold), that I could not bear to brush them as usual; and my distress of mind increasing, I became conscious of a change in the shape of the jaw, which contracted so much that the front teeth, which before were almost even, lapped over each other. Mentioning this to a medical gentleman, I got laughed at for my pains; but being perfectly convinced of the fact, I have carefully watched the state of my teeth, and invariably find, that whenever my mind is disturbed by any unexpected circumstance, they suffer also, either by lapping more, or becoming more tender. On one occasion I suspected a decayed tooth, for I suffered great pain; and I consulted a dentist, who assured me that the tooth was sound. After a few days I had paralysis of the right half of the lower lip, which continued for about a month. I am at this time, being forty-five years old, suffering from tenderness in my lower teeth, which I attribute to grief at the expected fatal termination of a daughter's illness, who has been confined to bed seven months, during the whole of which time the use of a tooth-brush has caused me great pain."

Mr. Bell, in his work on the Teeth, treating of constitutional neuralgia, says (p. 315), "It appears that no cause operates more frequently in producing, or at least in increasing the disease, than any violent mental agitation or long-continued anxiety. Numerous cases have come under my notice, the origin of which could be traced to the loss of near friends and relatives, a sudden reverse of fortune, disappointment of long-cherished and ardent hopes, and similar causes of mental depression; and in almost all cases, such circumstances occurring during an interval of relief, or even after the disease has been apparently cured, will be likely to occasion its return." It is well that the observation of these coincidences has been noted by so scientific a writer.

The costive state of the alimentary canal is for the most part concomitant with neuralgia as it is with spasm. It has already been remarked, that children who suffer from convulsions, or from any *degree* of them in the form of spasm, or indeed from most of the parts of the developmental disorder, are *generally* liable to a confined state of the bowels. A boy three years and a month old had only just completed his dentition of twenty teeth; he was an uncommonly fair child, with light hair. During the course of his dentition he had upon several occasions suffered from fever, and breaking out about his mouth and behind his ears. Latterly he had been very costive; and if his mother neglected to give him some medicine, he

went four days without a stool, a circumstance that alarmed her much, for it was attended with fretfulness and overpowering sleep. He started in his sleep; and he occasionally snored very loudly —"unnaturally," as she expressed it. A dose of castor oil, or of senna tea, produced a large scybalous motion, and the boy obtained relief, and became lively and playful. He was one day seized with a fit, fell down, foamed at the mouth, and gnashed his teeth; he threw himself about so much, that she thought he must be much hurt, and she tried to hold him, but he was too strong for her; she had no power over him; she lifted him on a bed as well as she could, with the assistance of a neighbour, and in less than a quarter of an hour he was "snoring asleep like." She gave him castor oil as soon as she could, and he was quite relieved in four hours. The phenomena were here evidently connected with a costive condition. Was that costiveness in any way connected with a state of brain influenced by the irregular and tardy development of the teeth? There was no room at the back of the boy's mouth for any more teeth, nor did there seem to be the usual spaces indicative of a preparation which is gradually made for the coming up of the first permanent molares. Were the capsules of these molares unduly pressed upon? If the last teeth had not been very good, I should have proposed their removal; as it was, I recommended senna and prunes, and milk of sulphur, to be taken alternately at bed-time; and with a view of invigorating the frame and encouraging development, a residence, if possible, in the country.

Costiveness may be idiopathic. The intestine itself may be in a sluggish state, the villous surface having been developed with an anormal want of its due share of nerve; but there is generally a coincident error of some other part of the dermoid system. In some constitutions there is, if the jaws and teeth be not consentaneously developed, a costive state of bowels, with a tendency to relieve the mucous surfaces of the consequences of their apathy, by the establishment of an irritation upon the skin. I have seldom seen a case of urticaria without having been able to trace some connexion between the complaint of the skin, and an anormal development of the teeth and jaws. The subjects of urticaria are most frequently persons of a costive habit of body, and commonly freely moved by magnesia taken as an aperient—the presence of acidity, or the passage of acrid bile, being the most usual antecedent of the urticarious eruption. I requested a gentleman to give me, in answer to some queries, a note of the symptoms which he had detailed to me in consultation; and with his permission I append it. This gentleman is 32 years of age, of a nervous and bilious temperament, with dark hair and eyes. He has lost his second bicuspids in the upper jaw, and has all his other teeth except the four last molares, for which he has not room in the jaw.

"I cannot," he says, "remember the time when I was not occasionally teazed with nettle rash; but I never heard, till you told me, that the complaint had any thing to do with my teeth and jaws. When I was a boy my nose used to bleed very often, and the key of the house-door put down my back generally stopped it. I remember upon one occasion it bled in a copious stream, and I lost about a pint in a few minutes. I was in the habit of picking my nose; it used to itch; and the desire to relieve it by putting my finger into the right nostril was irresistible, and this brought on the bleeding. It was an observation of my mother's, that my nose bled if I was for a few days free from my nettle rash. Sometimes the eruption kept me awake in a feverish state all night. I used to take calomel often, and rhubarb and magnesia. I do not remember what did me most good in this complaint when I was young; certainly I find your soda and mercury alterative lozenge, and magnesia, are the medicines which relieve me most speedily. In reply to your question about moaning in my sleep, I may mention a circumstance that I remember well. When I was ten years old I went on a visit into Norfolk, and slept in the next room to an old gentleman, who was considerably annoyed by hearing me moan in the night; and he came several times every night to awake me, as much for my sake—for he thought I must be in great distress—as for his own. I used to start in my sleep very often; and I always perspire a good deal in the night. At seventeen it was thought I was going into a consumption; I had very severe headaches, a hollow cough, constant starting at night, and heavy perspirations. Every

body was very kind to me; and I could not help feeling low that I was an object of so much compassion. At this time I have understood that my breath was so offensive that people did not like to sit in the same room with me. I could not read, or apply my mind to any occupation that required thought. Study made my eyes and my head ache severely, and produced a feeling of sickness and grief which was intolerable. The most comfortable condition in which I could place myself, was huddling up under a cloak upon some chairs, for I was often very chilly, and my headache and shiver were relieved by sleep. About my bowels, all I can say is, that they were invariably costive. I used often to go eight or nine days without a visit to the temple. I have had at different times many ideas about the kinds of food that brought on my nettle rash. Vinegar and all acids produce it. I am very fond of pickles, but dare not eat them. Wine of all kinds used to bring on my wheals and itching. I do not think it does now. Shrimps have brought them on. I never tasted muscles, so I cannot answer; but I never observed that periwinkles, or cockles, or oysters, did me any harm. I have no great fancy for vegetables; I prefer meat; and most frequently eat it without any thing but bread. The habit of tearing my finger nails I have had for years; and I have always had a great desire to pick the little hard inequalities out of bad paper. Many a time I have grieved at having injured a borrowed book, by unconsciously picking a hole in it in tearing out a little lump from the paper. The temptation was irresistible."

A curious circumstance relating to the accession of attacks of urticaria, purpura, and some other diseases of the skin, is, that they are often attended by one of two states of nervous system:—some degree, however *slight*, of mental clearness or excitement; or a sense of debility, somewhat analogous to that which succeeds loss of blood. In anormal dentition, the accession of the nisus of development appears always to be attended with some additional energy of morbid action in a disease of the skin which may happen to be coincident with it. This observation may easily be verified by an attention to the eruptions to which children are liable during dentition. Warts itch and are troublesome on the fingers of boys who happen to be under the influence of the nisus. In general, if a lad have porrigo scutellata, and any circumstance tends to excite his mind, it may be observed that the surface of the head is troublesome to him—not always perhaps. A person who stammers, if the fault is connected with anormal dentition, will at times find himself much more nervous than at others. A gentleman cutting wise teeth found that a horny scab under the angle of his lower jaw troubled him by itching intolerably, for three months before he cut a tooth. When the process was complete, the scab vanished.

An argument is very often made use of against my views, under the idea that it is a final objection, as well as a fatal blow. Those who oppose unphilosophically and controversially the search after truth, may remain satisfied that they have every thing their own way. Positions I have never advocated have, by these weak people, been put into my mouth. It has been said, "these inconveniences *asserted* to be coincident with some conditions of anormal developments of the teeth and jaws, cannot possibly have any connexion with them, since, if they had, they would be always in the same state, whereas we know that many persons who stammer experience the impediment from causes which can have nothing to do with the teeth."

Controversialists, without being aware of it, often talk great nonsense. Stammering is sometimes better, sometimes worse; sometimes linked with anormal development, sometimes not. Occasionally, like a permanent squint, like permanent blindness, like permanent deafness, it has commenced in alliance with an anormal condition of some development, and habit has fixed it incurably, or the "*temporary derangement of organization*" has become permanent. One or another particular train of events is not necessarily continuous; it may suddenly appear, and as suddenly cease. A person subject to epilepsy is not always in fits. In most cases where the process preparatory to cutting the wise teeth goes on for years, the effort at development is repeatedly made, and subsides again. Perhaps there is no room in the jaws for the teeth to come through into their places. Gradually an increase of growth takes place. The pressure of the developing tooth, or of

the neighbouring jaw-bone, may operate in destroying the pulp of the tooth next before it. Perhaps the first molaris may be so situated in respect of its nerve and blood-vessels, that it is the first to suffer. Its decay, especially if the corresponding tooth on the other side decays, arrests most frequently the fits of irritation to which the cutaneous disease was liable, provided space be afforded by this circumstance for the expansion of the jaw. How is it that, where complaints of the skin are vicarious with hemicrania, or with sick headache, these mischiefs vanish upon the re-establishment of the cutaneous disease; and if they be coincident with the anormal progress of development, they all vanish together when trains of harmony and perfection are restored? In a case of obstinate headache that would yield to no medicine, I had an issue inserted in the left arm. The man was a tailor, and a very highly nervous subject. The drain relieved him effectually. At the end of eight months erysipelas attacked his arm, and his life was in danger. The issue was poulticed till it healed. Soon the headaches returned, and were again relieved by producing the eruption on the arm and thigh alternately, which the friction of tartar emetic ointment produces. I lost sight of this man, who was an object of interest to me, for at nine and twenty he had no room in his mouth for his four wise teeth, of which I was anxious to watch the cutting.

Cerebral irritation may manifest itself by either of the two opposite conditions of mucous surface, diarrhœa or costiveness; and it may be partially or very greatly relieved by the establishment of an irritation on the skin, which is more or less productive of the presence of a secreted fluid. The developmental disorder, or infantile remittent fever, or degree of hydrocephalus, has thus far been analyzed in relation to some of its signs. In showing that it exists in some of its parts in those constitutions in which a normal development has not taken place, in connexion with some diseased conditions of skin, we trace its history through years, and learn the intimate coincidence that exists between disordered states of dentition, of mucous surfaces, and of external covering of the body. It would be very easy to detail numerous cases that have fallen under my observation, to bear out the positions I am endeavouring to establish. The desire not to be too diffuse restrains my illustrations; and some of them are necessarily checked, from the complications that attend them, since they would drag on the consideration of questions divergent from a logical train of propositions. Thus, in considering costiveness as a part of the developmental disorder, occurring in a case of urticaria, we are compelled to enter into considerations out of their place, to exhibit the relation of this diseased condition of the skin with anormal dentition. In quite a contrary state of alimentary canal, coincident, too, with anormal dentition, one of diarrhœa, accompanied by atrophy, I have remarked the existence of molluscous tumors of the head, face, and neck. I have had several cases in which warts about the forehead and fingers accompanied anormal dentition and developmental disorder. A lady called upon me one morning, to consult me about her own health. As she was going away, she asked what was good for warts: her son, nine years of age, had his fingers covered with them. He was a healthy boy, but backward in shedding his teeth. She had left him in the carriage, and I requested to see him. I found a boy rather tall for his age, with a pale, waxy, and very greasy countenance; his tongue had the raspberry-and-cream character. He had a very costive habit of body. Upon enquiry, I found he had several of the distinctive signs of the remittent disorder; but as no body had taken particular notice that he started and perspired at night, and had very often, after doing his school exercises, a flushed face and a sick headache, it was concluded that he was a healthy boy. He had shed four incisors in the upper jaw, which were replaced; two central incisors in the lower jaw were growing up; the two lateral inferior incisors were persistent. All the deciduous molares were decayed, and the first permanent molares were yellow imperfectly-formed teeth. I told the mother that a dentist could cure the warts by putting the mouth to rights: that I had frequently seen warts on the hands, which had vanished when the development of the teeth had become complete.

A young woman, aged nineteen, of a fair complexion, tall, and of lymphatic embonpoint, the servant of a patient, was sent to me lately for an opinion upon a phlegmon which had formed on the back

of the first phalanx of the middle finger of the right hand. It was connected with a molluscous wart, and there were two more warts of the same character attached to the inner surface of the next fore-finger. The whole of the back of the hand was puffy, from the inflammation. Poultices with linseed-meal did very little good. There appeared to be no tendency to form healthy pus. This was remarked by Mr. West, a medical gentleman who was with me at the time; and he was not a little surprised at my declaring that a good maturation would take place if the girl should cut her wisdom teeth. The mouth was examined, and it was found that she had thirty teeth; the two last molares in the lower jaw had not protruded: they were covered with thick cartilaginous gum. I pointed out the raspberry-and-cream tongue. The girl refusing to have the gums divided, had directions to take six grains of calomel at night, senna tea and Epsom salts in the morning, and to go on poulticing. Two days afterwards, the hand becoming rather worse, she applied to have her gums lanced. They were freely cut, and in another couple of days she called again to shew me that her hand was well. Dr. Rigby happening to be with me at this time, I called his attention to the case.

[To be continued.]

PRACTICAL REMARKS

ON

HOT AIR BATHS AND FUMIGATIONS.

To the Editor of the Medical Gazette.

Sir,

Before I enter upon the proper subject of the following remarks, I may, perhaps, be permitted to offer a few brief observations on the modes of bathing in ordinary use: I shall then proceed, with all the explicitness that may be required, to treat of hot air baths and fumigations, with reference chiefly to their therapeutic efficacy,—and in doing so, it shall be my aim, as much as possible, to keep the main point of practical utility constantly in view.

As to cold water baths, fresh or salt, or shower baths, I am not aware that any particular observations are necessary—except that, perhaps, with regard to sea-bathing I should be inclined to express an opinion, that its virtues are rather overrated for their supposed effects in skin complaints. Sea-bathing is too indiscriminately used: persons commonly have recourse to it for no other reason than because they have heard it recommended to others who required it. As far as my experience goes, I must say that I have seldom known sea-bathing to effect any permanent good in affections of the skin: on the contrary, many persons attribute the origin of such complaints to bathing in sea-water. It is often unadvisedly resorted to by weakly patients as proper to give *tone* to the system: but much aggravation of their weaknesses and maladies is frequently the only result. The test of the efficacy of sea-bathing is simple. It can never be tonic in its effects unless when immediately followed by a glow on the skin, accompanied by increased cheerfulness and activity: whereas, in but too great a proportion of instances, it is followed only by chilliness, lassitude, and headache.

Warm water baths, when resorted to for pains in the joints, spasms, and similar disorders, ought to be taken at much higher temperatures than they usually are: and the heat of the bath ought to be kept up by frequent additions of hot water. The patient ought also to remain immersed in the warm water bath generally for half an hour, three-quarters, or even more—until, in fact, a state approaching syncope is produced. I would add, that it is often adviseable to infuse from four to six ounces of subcarbonate of soda in the warm water bath as a good means of softening hardened cuticle, and favouring increased perspiration afterwards. In pruriginous affections, perhaps, a temperature as low as 94° or 90°, or even 10 degrees lower, may be found most beneficial, as well as most comfortable; but the patient should remain in the bath for a lengthened period—from one to two hours.

The *douche*, warm or cold, is a mode of bathing that deserves more attention than it has hitherto met with in this country. A column of water being made to jet with force from a small orifice, constitutes this form of bath, and for private use may be conveniently managed by employing for the purpose the garden-engine pump, as almost any degree of force can be given to it. But a modification of the douche, in which hot vapour is used in lieu of water, and directed to

the part affected, is attended with superior advantages. This kind of bath, however, is best administered at some of the regular bathing establishments.

A good *vapour bath*, constructed on proper principles, ought to be so contrived as to keep its lowest part hottest; it should also have an abundant supply of vapour at the disposal and under the perfect control of the patient or his attendant. The head should not be enclosed in this sort of bath, except, perhaps, where it may be desirable, on account of the presence of pulmonary disease: and then the management with regard to temperature and duration should be superintended by the physician.

Of late, there have been many contrivances advertised for the administration of vapour baths, of a portable description. They are all too ill constructed, and altogether too extemporaneously fabricated, to be useful. I do not know of any portable vapour bath that deserves the recommendation of the profession, except the one invented by my friend, Captain Jekyll, of the navy: it is so well adapted for the ends in view, that it leaves nothing more to be desired, and is now generally adopted in the families of very many noblemen and gentlemen. The *humid sulphur* vapour bath, as advertised, begins with a misnomer in the first place, and is nothing more than a simple vapour bath, as water does not dissolve sulphur, unless aided by chemical agency, and then the smell becomes insufferable, and totally unfit for respiration.

I shall now make a few remarks on the fumigatory method of treatment, which had its origin at the hospital of St. Louis, at Paris, and the use of which was soon extended all over the continent. But although it originated in France, I find that the method of fumigation is seldom properly managed there, in consequence of many of the practitioners, who have the apparatus, not attending exclusively to its application; but being engaged in general practice, they leave its management, it appears, to the care of incompetent attendants; and the practice is open to much deception; as the patient cannot tell whether the fumigation is administered honestly or not. But this evil does not extend to the hospitals, for there they are administered with a correctness and precision truly remarkable; and the extent to which these baths are given would seem almost incredible. At the hospital of St. Louis alone, there are administered annually upwards of 150,000 baths*.

In support of my position respecting the care with which these baths ought to be administered, I shall beg leave to quote an extract from the Deliberations of the Council for the administration of the affairs of Hospitals, Dispensaries, &c. at Paris. It relates to the petition of Dr. Galés to the Minister of the Interior,—Dr. G. being desirous to be appointed one of the physicians of the Hôpital St. Louis. "The fumigations should only be resorted to under the direction of a physician. Dr. Galès was the first to bring this important remedy into extended use, and has been chief apothecary at the hospital since the year 1792. He is not, however, entitled to the appointment named in his petition —first, because the physicians of the Hôpital St. Louis attend, and ought to attend, themselves, to the administration of the fumigations; secondly, because Dr. Galès has had no medical practice, having been only the apothecary to the Hospital; and, thirdly, because this mode of treatment should only be intrusted to the physicians; and the appointment cannot, consequently, be granted to him. We consider him entitled to his retiring pension, and also to a reward, which it does not become us to fix. Signed by Pinel, Dupuytren, Dubois, Tartra, Escarron, Bouillon, Le Grange, &c. Dated Dec. 19, 1817."

When the fumigatory method was first introduced into Germany, similar care was observed, as I would beg to show by another short quotation, from Dr. De Carro, the Sir Henry Halford of Vienna. He says, " A fumigatory bath should never be conducted or directed except by a judicious and enlightened physician, since it affords a most powerful remedy, the imprudent employment of which might be most injurious. Moreover, the physician ought to be firm and disinterested, so as to know how to resist the frequent instances which occur of patients wishing to use it in diseases to which it is not applicable. What are we to think, therefore, of a person unqualified having the management of the fumigating apparatus? as well might we abandon patients themselves to the employment of the lancet, of mercury, or of opium. A fumigating apparatus is

* Drs. Cazenave and Schedel, p. xxxvi. 1828.

not an instrument which can be employed without the direction of an experienced physician; and we should take the greatest care of comparing it with a bathing tub, which one might use according to one's pleasure, or under the superintendence of a director of baths *."

These quotations will, I think, serve to show the great importance of having fumigatory establishments properly conducted, and not, as they have too generally been in this country, confined to the hands of ignorance and empiricism. I have known several instances of servants employed in the baths, who, after having lighted the fires and attended the patients for a time, thought themselves fully qualified to understand not only the nature of fumigations, but the diseases for which they were suited. The next step has been, of course, for these servants to set up for themselves; and medical gentlemen, not yet fully acquainted with the fumigatory process, on sending patients to the establishments of these persons, have often been seriously disappointed.

Having premised these few remarks, I now come to speak of the nature of the remedy itself.

In the fumigating apparatus, the patient is placed in a box, heated from beneath, and the whole of the body, except the face and forehead, is inclosed, and submitted to the combined action of heat and of any chemical gas, the heat occasioning the gas to rise and surround the whole of the surface of the patient. The temperature of the apparatus, at the time of the patient entering it, should be about blood heat, or 100° of Fahrenheit, otherwise the patient, from being naked, would feel uncomfortably cold for some time after going in. The patient being seated in the apparatus, the door shut, the lid down, the hood adjusted, and all the adjunct parts accurately closed, the temperature gradually rises, about one degree each minute; and after being thus seated for a quarter of an hour, twenty, or twenty-five minutes, the temperature will be from 120 to 130°. This may seem a great heat, but I beg to say it is frequently not sufficient; and even a much higher degree is borne without inconvenience, particularly by those who are of a phlegmatic habit, or when the patient has been used to the apparatus, or when he has a cold; it then requires a high temperature to bring the cutaneous vessels into a state of activity. I seldom go into my bath without its first being at 130°; and I have often to resist the wishes of persons who ask for a high temperature, until I become somewhat acquainted with their constitutional diathesis.

It is a matter of surprize to many persons, how so high a temperature can be borne without oppression; but it is known to the better informed, that the more vapour or air is rarified above a certain degree, the cooler it becomes to our senses; and I have never known a patient complain of the heat after the sensible perspiration has broken out. A patient, seated and inclosed in the fumigating apparatus, in three or four minutes is sensible of an increased general and agreeable warmth; in a few more minutes the countenance looks cheerful and animated, the eyes appear sparkling, the pulse gradually increases in frequency and fullness, and the countenance becomes florid; transpiration from the skin is now greatly increased, and soon sensible perspiration breaks out, showing itself on the forehead, which it should be recollected is excluded from the apparatus. The patient is no longer sensible of the increasing temperature, and the pulse diminishes in frequency, remains full, and perfectly soft, though previous to his going into the apparatus it may have been hard. After the perspiration has appeared on the forehead for five or six minutes, the full effect of the bath has been attained, and it is wrong to remain in the apparatus longer. If the impetus given to the system be continued longer, it is at the expense of those agreeable feelings, and the patient complains of languor, and is disposed to sleep.

If such be the effects of the warm-air bath on the various functions, and that simultaneously, establishing, as it were, a concord or balance of all the circulatory fluids of the body, pathologists cannot be at a loss when and for what diseases such remedial agency is indicated. But when, in addition to the effects arising from the simple process of the hot-air bath, we take into account the operation of the gases that may be employed, surrounding the whole of the excited surface of the patient's body, together with all the internal functions similarly ex-

* Observations on Sulphurous Fumigations, by J. De Carro. Vienna, 1819.

cited, it must then surely be allowed to be a therapeutic agent of vast importance to the physician, who will further bear in mind, that what is thus done is to be considered as only auxiliary to other means.

The sulphur fumigations are those most commonly used; and it deserves to be known, that independently of the advantages just stated, the sulphur fumes, twenty-nine times out of thirty, occasion a general desquamation of the cuticle; whence their utility in cutaneous diseases. We all know what a desirable sequel this desquamation is after an attack of measles, scarlatina, &c.: for no sooner is it established than the important functions of the skin become restored to activity, and there remains little or no dread of ophthalmia, congestions, cough, or consumption; the foundation of which is often based on the remaining effects of these and similar diseases.

In active inflammations of the skin and sub-cutaneous tissues, usually conjoined with inflammation of the general system, as in eczema, ecthyma, impetigo, &c., &c., the fumigations are frequently misdirected: in such cases, they should only be used when the patient has been previously bled, or other antiphlogistic means have been pursued; but with these precautions I am sure the fumigatory method will be found to answer all reasonable expectations.

In the removal of an impervious cuticle, there is no remedial agent that I know of to be compared with the sulphur fumigation; and in this point of view, as an effective alterative, it cannot but be considered as invaluable. But the great advantage of the sulphur or other fumigations depends, I am inclined to believe, on the temporary application of increased heat. Heat lends a kindly aid to nature in the performance of all her offices, in the furtherance of her efforts to attain and perfect the objects of the living principle, either in animal or vegetable life, and without it all seems withered, and prone to disease and death; and it thus becomes an auxiliary of no mean importance in aid of the healing art.

In conclusion, I must again observe, that success or failure with this remedy, and particularly with the fumigations, must mainly depend on the scientific construction of the apparatus, the manner in which the process is conducted, and the nature of the cases submitted to its influence. When properly managed, it is always satisfactory to the patients; so much so, that they are apt to anticipate too much from its operation; and it is often requisite to check such expectations. Yet the temporary impetus thus given to the vascular system, to the secreting and absorbing functions, and the energy conveyed to the nervous system, are fully adequate to show its utility in those diseases where weakness, obstruction, or local determination, prevail —as in anasarca, œdematous swellings, scrofula, diabetes, or affections depending upon general or partial loss of tone and cachectic habit. On the whole, the fumigatory method cannot but be looked upon as one of the most valuable means we possess either of effecting the preservation of health or the cure of diseases. But I cannot conclude without once more stating my opinion, that it is by far too powerful an agent to be entrusted to the hands of the incompetent.—I am, Sir,

Your obedient servant,

JONATHAN GREEN, M.R.C.S.

40, Great Marlborough-Street,
Dec. 10, 1833.

DEFENCE OF MEDICAL APPRENTICESHIPS.

To the Editor of the Medical Gazette.

SIR,

I REQUEST your assistance in laying before the medical public a few remarks, in answer to a letter which appeared in one of your late Gazettes, with the signature of Mr. Solly.

Numerous communications on the subject of medical apprenticeship have been made to one of your contemporaries, who has most faithfully published them; all or most of them bearing marks of the same rank and order of mind: most of them also, from the narrowness of their views and the fierceness of their scurrility, being perfectly adapted for the pages of a journal which, like the dogmas of the atheist, would unsettle every thing, and settle nothing.

It has fallen to your lot however, sir, to send forth to the public a letter which embodies much of the objectionable principles (not, certainly, the abuse) of those productions.

I do not know that I should have been induced to answer this letter, had not the author of it announced his intention of publishing a plan of medical reform, to be founded on the principles which it contains.

The letter is, I think, adapted to influence two classes of persons, which comprise a large proportion of our students: those, namely, who feel rather than think; and those who, if they think at all, either cannot, or will not, do it for themselves, but are content to take their notions from others. With both these classes, a series of letters like Mr. Solly's would work wonders; especially with the latter class; for with them, a falsehood fifty times repeated generally passes for a truth *.

It is far from my intention to deny the necessity of reform in the medical profession; but let us be cool: men who legislate in a passion, can never legislate well. Some of our reformers have been getting on so fast of late, that they have won a vast deal of acquired velocity, which perhaps may carry them too far. The views of the whole class of whom I am speaking, appear to me to be both narrow and erroneous. In the first place, they attribute all that is bad in the medical profession to a defective education; and secondly, all the defects of that education to the system of apprenticeship;—two fallacies, distinct and separate in themselves, yet bearing on each other.

The first fallacy I shall not notice now; it would be travelling out of the record: I shall confine myself to answering the second, which forms the subject of Mr. Solly's letter.

The description which this gentleman has given of apprentices, only serves to prove that he has taken his examples from extreme cases. The apprentices he speaks of are nothing more than shop-boys to druggists; or to that kind of medical centaur, half chemist, half apothecary. The apprentice of the respectable general practitioner, Mr. S. appears to be unacquainted with. *His* apprentice is one who, when the "making of draughts" and the "rolling of pills" are finished, is prevented from pursuing his professional studies by the necessity of attending to the counter; or one who, even if his leisure serves, is unable to devote his mind to study from a sense of the degrading nature of his situation; being, in fact, only a "servant, with a more courteous title." Is Mr. Solly serious? If being received into a genteel, or at least a respectable family—being treated as a member of it at all times, and occasionally giving himself more airs than the master of the house—can make a person a servant, I can only say that Dr. Johnson has given a wrong interpretation of the word: of course, attention to the business of the master is required, and it is well for the apprentice that it is.

If the keeping of a youth under proper control as to his habits, manners, and hours, would constitute servitude, in the opinion of Mr. Solly, he must be prepared to admit (if consistent) that license only is liberty. If it is to the mere state of apprenticeship that the term "degrading" is applied, the medical profession stands, in that respect, on a perfect equality with others. The artist, in many branches, the future architect, and the lawyer in *esse*, are all apprenticed; and who ever dreamed of calling them "degraded?" The last-mentioned personage even goes about with a blue bag in his hand, while one of our "servants with more courteous titles," would blush at the mere proposal of such an exploit.

It would be easy to shew, that, as far as the general practitioner is concerned, a very different plan might be made more advantageous to him; but I confine myself strictly to the matter as it concerns the apprentice, which is all that is at present before me. For the sake of perspicuity, I will divide what I have to say with reference to the two points which Mr. S. has mentioned at the outset of his letter—viz. education and moral feeling.

As it regards the education of the general practitioner, I consider the system of apprenticeship, under proper regulation—or modification, if you please—as decidedly the best of any. There are some parts of the profession not to be learned in any other way: a knowledge, more especially, of pharmacy and materia medica, which cannot be gained at any hospital, nor at a dispensary, nor by apprenticeship to hospital surgeons. They could not teach these branches of the profession if they would; and the greater number of them would not if

* It can scarcely be necessary to say, that by the term "falsehood" I mean merely *false in argument.*

they could. It is not so long ago that one of the most eminent among them thought it worth his while to thank God that he knew nothing of medicine!

In the house of the general practitioner the apprentice may trace, if he pleases, the course of every case upon the books, and have them explained and impressed on his memory: in due time he visits them. Elementary reading is provided for him, and, when he is fit for them, he has books of a higher order. Theory and practice are thus united, and at the end of the first three years he attends at the hospital, and enters on the enlarged and varied course of study for which he is then prepared, and which is finally to fit him for the duties of his station: and these things attained, he wants for nothing but that experience which only time can give. A man thus educated is far better prepared for the practice of his profession than the young Edinburgh physician, who steps, or rather jumps, into the first rank of his profession, with a head so full of theories, and little else, that it resembles, like my uncle Toby's, "the inside of a smoke-jack." In the intervals of professional duty, great service may be done to a youth by cultivating in him a taste for literature in general; and thus preventing his mind from sinking to the level of those low pursuits with which it might otherwise be satisfied. I may mention another great advantage of the present plan (for it is one)—that any other, either for keeping a youth for some years longer at school or college, or for sending him to pass the whole time of his medical education at an hospital, where he might live as he liked and do as he liked, must be attended with far greater expense and far less profit.

From all my experience, however, I am inclined to think that an apprenticeship of three years would be far preferable to one of five. By the end of the third year, the apprentice has gained all that he cannot learn at the hospital, and is in want of what he cannot have in private practice. Now, too, he learns at the hospital that he is *a gentleman*—that he ought to be above control, and that his master is a tyrant for expecting that he should strictly attend his lectures, and read on the subjects of them when at home, instead of spending his time at billiards, or increasing the strength of his reasoning powers by calculating the odds on a dog-fight*. It requires a youth of some principle and some good feeling, to resist impressions which are constantly directed at the weaker side of his nature; and if they are not resisted, the remaining part of his time is spent in a manner uncomfortable to himself and to all about him.

So much for professional education merely. Now as to "moral feeling." A high degree of moral feeling (says Mr. Solly) is necessary in the medical profession; *therefore* apprenticeships should be abolished. Now I say, too, that high moral feeling is desirable for the medical profession, but therefore I argue that apprenticeships should *not* be abolished.

But what may Mr. S. understand by "a high degree of moral feeling?" The highest degree of moral feeling is religion. He does not mean that. A moderately high degree of moral feeling would exclude, at least, such things as profane swearing, taking God's name in vain, and indecent conversation: but Mr. S. cannot mean that even; for if he looks around him at the hospital, even among those who have never been "degraded" by apprenticeship, he will find that the moral thermometer does not mount so high.

But where and how is this moral feeling to be gained and fostered? Is man born with it? In one sense he is: he is born with a conscience, the sole relic of his moral nature; but the tendency of that nature is to evil—small, perhaps, in his early years, but, like the sailor, who varies only half a point from his proper course at the commencement of his voyage, the farther he proceeds the wider will he go astray. The neutrality of good and evil agencies is not sufficient to insure his rectitude—a bias to what is right is constantly required; and where is that to be found? Not at an hospital, nor at a provincial school, or by whatever other name it may be called. Would any parent send a lad of sixteen to such a place to strengthen his moral feelings, where, even if the stricter discipline now in use can bind him to his studies through the day, the whole of the evening and the night are his to

* This is no hyperbole, but strict fact. I believe the root of the evil to be, that a youth no sooner enters our profession than he is taught, by certain medical journals, and by the lads who are influenced by them, to look upon his master as his enemy, instead of one of his best friends; and to set himself on the defensive on all occasions accordingly.

be wasted if he pleases in every haunt of profligate resort, where all temptations to evil surround him, and where the encouragement given to "moral feeling" can be but weak, and faint, and covert? Can such a feeling thrive and grow vigorous from such encouragement? We might as well expect to rear a greenhouse plant by placing it in a situation where the sun never comes, and warming it with a candle and lanthorn. If a youth must leave his father's or guardian's house, the only other place in which his "moral feelings" will be preserved will be found in the house of a person who, granting him every necessary and reasonable indulgence, will care sufficiently for him to regulate his tastes and habits, and controul all tendency to excess, till he arrives at such an age as to be somewhat capable of judging for himself. And here we come to the point. This regulation and this controul are the real grievances—these are the things which make apprenticeship "degrading." And the "moral feeling," I cannot help thinking, of the opponents of apprenticeship, is neither more nor less than the morbid pride which renders an experienced and headstrong lad impatient of all restraint.

To shake off all such trammels is, I believe, the whole reform that is desired by our statesmen of nineteen and twenty who figure in the pages of the Lancet. In all of their thousand and one attacks on the present order of things, we find that the whole of each effort has been directed at one and the same point—the demolition of the system of apprenticeship—and nothing else. I do not wonder at this—the master, the guardian, the head of the house at the University, are all considered tyrants by the youths whose goodwill and pleasure they are obliged to thwart: but I do wonder that older men, and men who are, or who would be, the instructors of youth, should lend their aid to strengthen such a feeling.

I have said, that as far as the general practitioner is concerned, another order of things might be made much more desirable for him; but I will also say, that should the system of apprenticeship be done away, that other system, whatever it may be, which most resembles it in all its stronger features, will be adopted by every father who cares for the welfare of his son.—I am, sir, your obedient servant, MILO.

ANATOMY OF HERNIA—REJOINDER.

To the Editor of the Medical Gazette.

SIR,

WHEN the preposition "between" is used in anatomy, it is employed when speaking of the situation of any part with reference to two others—1st, when one of those parts lies anterior, and the other posterior, to the third; and, 2dly, when one lies internal, and the other external, to the third. If your correspondent, the "Teacher of Anatomy," will take the trouble of reperusing, along with the context, the passage which he so triumphantly quotes from Scarpa, he will there find that that writer uses the term "between" in the latter sense; that he is describing the origin of the cremaster muscle; and that his observations have no reference whatever to the muscularity of the internal abdominal ring.

Hoping that your correspondent is more happy in his expositions *ex cathedrâ*, than in his attempts to rectify the errors of his contemporaries,

I am, sir,
Your obedient servant,
A LECTURER ON ANATOMY.

Dec. 23, 1833.

ON

WARTY TUMORS IN CICATRICES.

BY CÆSAR HAWKINS, ESQ.
Surgeon to St. George's Hospital, &c.

(Read before the Medico-Chirurgical Society, Dec. 10, 1833.)

THE author began by observing, that considerable obscurity had arisen in pathological anatomy from the want of a precise meaning being attached to terms in common use; of these, the word "malignant," was adduced as an illustration. By this expression one person means a local disease connected with a constitutional taint, by which it is rendered incurable, such as cancer and fungus hæmatodes; while others, by malignant, mean simply a disease that is incurable, such as lupus, or the corroding ulcer of the uterus, though they are attended with no new structure—though

the disease does not contaminate the surrounding parts, nor the absorbent glands, nor appear elsewhere. Again, it appears to Mr. Hawkins that some appropriate designation is wanting for those diseases which do form a new structure, and spread to the surrounding parts, and require the removal of their entire bulk to effect a cure, but which do not contaminate the absorbent glands, and have no tendency to reappear in a distant part of the body,—such a disease is the warty tumor of cicatrices, and which occurs occasionally in old scars many years after the original injury, and from wounds very different in their natures.

There appears in the first place a little wart, or warty tumor, in the cicatrix, which is dry, and covered with a thin cuticle, but which soon becomes moist and partially ulcerated, like the warts of mucous membranes, from which a thin and offensive, and semi-purulent, fluid is secreted. In this stage it gives no pain nor inconvenience.

This first stage is shewn in a preparation of a tumor, about the size of a small apple, which was removed about the year 1826 by Mr. Brodie, in St. George's Hospital, from a man who had been a soldier in India for many years, and had been repeatedly flogged for some offences. The last punishment had been a flogging of 1000 lashes eleven years before his admission. In the cicatrix several warts sprung up, which coalesced to form a tumor, the probe passing between them to the basis of the disease. Around the tumor the skin was of a dark livid colour, and studded with several smaller warts. The man easily recovered, and had no return of the disease.

In the second stage of the disease the growth of the tumor becomes more rapid —the warty appearance being in some measure lost—a more solid substance projecting from the diseased skin, which bears more resemblance to the fungus of fungus hæmatodes; the formation of fresh warts being still seen around the tumor, and preceding the change which has been alluded to. The tumor is very vascular, and bleeds when touched; but its irregular surface still allows the probe to pass through its structure, except where it is most firm.

Two cases were detailed in illustration, after which the author proceeded to argue, that although disease of some bone was occasionally superadded, yet the origin of the "warty tumor" was traceable to the texture of the skin.

There can be no doubt that the removal by the knife is far more effectual than any attempts to destroy it by caustics, since the whole thickness of the skin requires to be removed; and the action of caustics is too uncertain to lead to any reliance upon them. Experience shews the same thing with regard to the much smaller tumors of the face in elderly persons, which though sometimes destroyed by the use of caustic, are often irritated, and made to spread with increased rapidity, where the caustic has been insufficient entirely to destroy them.

After the tumor has become solid and prominent, a new action takes place in it, and the tumor ulcerates and sloughs alternately, with a great deal of pain and suffering; and the tumor is destroyed down to its basis, so as to present the appearance of a foul excavated ulcer, except in its circumference, where the skin is raised, thickened, and everted; and from time to time warts are generated, which again ulcerate and slough, till the patient becomes gradually worn out by suffering, but without having at all the sallow and peculiar aspect of a person dying of a malignant disease; and on examination of the body no disease of the absorbent glands is found, nor is there any sign of malignant disease in the interior of the body.

Several cases in point were detailed; and Mr. Hawkins, in conclusion, insisted on the expediency of at once removing the disease with the knife, instead of wasting time in the trial of other means, which experience has shewn to be unavailing. When it has thus been effectually removed, the minds of the patient and surgeon may both repose on the assurance that the disease is not "malignant," in the common acceptation of the term; or not, in short, liable to recur.

MEDICAL GAZETTE.

Saturday, December 28, 1833.

POLITICO-MEDICAL SOCIETIES.

If any proof were needed to shew the absurdity of supposing that the majority of the members of the Westminster So-

ciety were *levellers*, it was given on the last night of the ballot. Notwithstanding all we were told by the radical press, about multitudes filling the place of meeting night after night, when reform (so called) was discussed—lo! when it came to the point, and the levelling army was to be numbered in the day of battle, the multitude vanished, and left only fifty-two behind. Nor were these all their own; the levellers in the end could only muster twenty-one! There is nothing like the precision of an arithmetical fact. So much for the strength of our ultra-reformers.

But there is another inference that may be drawn from this fact—one of much more importance; for we never expected the levellers, with all their noise and blustering, to muster more than they did—and that inference is, that if the Society were attended as it should be, and that the more respectable members gave heed to the doings of the noisy few, the majority, instead of being thirty-one, would have been tenfold as many. The number on the books of the Westminster Society amounts to several hundred names; and how happens it that, when a grand point (as the radicals would have it), touching reform, is to be decided, scarcely more than half a hundred can be got together? In this fact we can discern indications favourable to the character of the Society. They repudiate, in the mass, the misappropriation of the business of their meetings to the discussion of medical politics; they perceive that, as matters at present stand, the floor is in the possession of a little faction, who, with spurious liberalism on their lips, and in their hearts a desire to display themselves after their own small fashion, have taken up questions which they conceive wonderfully well suited to shew them off in the eye of the world. The majority of the members are in the right; they will not countenance such proceedings; and we only blame them for not asserting the proper objects of the Society—for not putting down by their personal influence the disturbance of agitators—and for not preventing the Society from being turned into a politico-medical arena.

We ought scarcely to confine our observations to the Westminster Medical Society: nor shall we; for they are almost equally applicable to the other medical assemblies about town. Let any one look into the reports of the proceedings of certain of these, and he will immediately see that the main business of their meetings turns upon the performances of the same little *corps dramatique*. These indefatigable actors do not care to confine their talents to a particular theatre; and hence, what they have rehearsed on the "Westminster" boards on the Saturday evening, they generally repeat at the "London Medical" on the Monday, and have the kindness to hash it up again for another audience at the "Medico-Botanical" on Tuesday. This we have often noticed; and such speeches—such performances to be exhibited in the metropolis of Great Britain!

It is impossible not to take this view of our societies, when we consider what they are, and what they were originally intended to be; it is, besides, in this light and no other that they must appear to the eyes of foreigners and strangers, who, upon visiting London, are of course tempted to pay at least one visit to our Academies of Medicine; but, behold, they soon find that things are managed differently in England from what they expected; they see that any thing but *medicine* is here the order of the day—that each society is but the echo of the other—and that the same small debaters are the performers in all. Proceedings like these may have become too familiar to create surprise in those who frequently witness them; but, for

our part, they certainly cannot pass current with us, nor prevent us from honestly expressing our opinion of the nature and tendency of such anomalous performances.

But these doings are harmless, it may be said; and it is a pity to spoil the diversion of those who are amused. We have our doubts of this: let us look for a moment to what the Westminster Society have done, and what by their example has been done after them. Whatever may have been the intention of the original framer of the resolution about the "One Faculty"—if he meant any thing more than to mystify—it is but too evident what a handle was made of the proceeding by those who had other designs and a deeper game to play, construing it to the destruction of all legitimately constituted authority amongst us, and aiming—not at reform—at the radical subversion of all existing institutions. Borrowing a torch from their brother destructives in the field of general politics, they would gladly apply it to the foundation of all our medical establishments. And what has been the consequence of this metropolitan example so industriously displayed? It has not been unfertile, short-lived and abortive as it was. An opportunity was obtained of blowing the trumpet of discord for three or four nights, with the hope, of course, of being responded to by all the levellers throughout the kingdom. In an unlucky hour the blast was heard at Sheffield; and measures of revolution were adopted by those who professed only to reform; but with what grace the too easily misled party will retire again, upon finding that they obeyed a false and treacherous signal, we have no anxiety to know; we only hope that the mischievous impulse has not extended further, and that no more dupes shall have been made in the provinces.

It is surely high time that the more orderly medical men of the metropolis should take these proceedings into consideration; they cannot but be more and more convinced of the propriety of totally ablegating politics from the business of their *medical* meetings. Of politics we fancy they have quite enough out of doors; and of matter for their professional criticism, plenty within them. What, in the name of common sense, have *medical* societies to do with politics, or even with the external arrangements of the profession? The primary purpose of those establishments was simply the discussion of medical subjects—points immediately connected with the principles and practice of the healing art; and we cannot but hold it to be a palpable alienation, a profanation, of the designs of their first founders, to convert the meetings of the members of any of our medical societies to the discussion of questions of medical reform—even though it were not *revolution* that was aimed at under the disguise of that title. Let medical men petition parliament, as the members of the several corporations to which they belong, in the same manner as the Licentiates of the College of Physicians have done;—let them appear in the character in which they are recognized by the public and by the legislature; and let each man have the honesty not to multiply himself above a certain number of times, signing petitions now as member of one society or association, and now of another. Above all, let them take care not to petition for contradictory boons, as every Licentiate of the College of Physicians must do who signed the "memorial" of last season, and the prayer for "One Faculty" of this.

Why should the Westminster, or any other merely medical society, be made the field for the discussion of such topics, so totally foreign to the objects of its institution? And then to find *such* a resolution almost palmed upon the West-

minster Society—almost thrust upon them!—it is gross—it is criminal. We can find no precedent—no type—for any thing so absurd, unless we were to fancy the Astronomical, or some other private society of Cambridge, calling for the abolition of all the observatories in the kingdom, because, in their opinion, there ought to be but *one* observatory, from which all men should regulate their chronometers. There are those, we doubt not, who would think this a fair subject enough to occupy the Astronomical Society; it would be a reform; and what so fitting now-a-days to engage the attention of learned bodies? We must not be surprised if we hear of reform being broached at last in the British Association, at some of their annual meetings.

If it be objected that we have, even at the present moment, an example in France, of the first medical society in that kingdom being engaged in a project of reform—and a sweeping project too, which bids fair to reorganize the whole French medical profession—we reply, that, unfortunately for themselves, the members of that society are so engaged, and with what advantage will be seen by those who read the reports of their proceedings: there will it be perceived to what evils the discussion of medical politics, even in a well-ordered society, can give rise—the caballing, petty intriguing, selfishness, and illiberality, exhibited by the members who take an active share in the debate. Besides, the Academie de Médecine has no choice in the matter: the consideration of the project was entered upon reluctantly, and at last only in consequence of a pressing command which they dare not disobey. The members of the Royal Academy of Medicine are all pensioners of government, and it is part and parcel of their stipulated duties to execute tasks of this description imposed on them by the minister. Questionable, however, as the excuse would be, we should not hesitate to accept it, were the Westminster Society so called upon by government: it is not, certainly, a very likely occurrence, heaven knows; but did the minister, or the legislature, in any way suggest that the sense of the whole profession should be taken, through the medium of the Westminster Society, as to the propriety of reforming or abolishing existing medical institutions, we should have no objection to an interruption of the proper business of that learned body, while they conducted decorously and discreetly the inquiry submitted to their consideration.

It has been the practice, we know, of the Westminster Society, to present petitions to parliament on questions touching the interests of medical science—pending the Anatomy Bill, for example; but we doubt greatly, even on such questions, the utility of their interference. Such practice, however, can afford no precedent for—and, indeed, is a simple and praiseworthy task, compared with—the outrageous proceeding of making themselves the tools of a radical few—allowing measures of the most sweeping and absurd description to be discussed in their presence, and to be even brought to the vote. We cannot conceive any thing more calculated to bring the Society into disrepute.

In conclusion, we would say, that if it be considered prudent to proceed in advance of the legislature—to volunteer a light to guide their steps—then we repeat that the proper course is to call meetings of the different departments of the profession. But let those who hold this sort of public appeal indispensable, ascertain, in the first place, who shall preside, and who will be present. Let them, in the first instance, get up a numerously signed requisition for such a meeting; so that the profession may not be once more made ridiculous in

the eyes of the public by a mock or a mob meeting, of which we have had but too many specimens within the last year or two. What is called an "aggregate" meeting means a meeting of Wakley's rabble to pass intemperate resolutions, and calculated to retard, instead of advancing, the cause of reform. But above all things, we advise those who feel inclined for this mode of proceeding, to be on their guard that they be not about to provide one more stage for the exhibition of the *corps dramatique*, of whose performances, in all conscience, we have had quite enough. With these precautions and needful preliminaries, proceeding by the way of public meeting may not be objectionable; but we protest strenuously, and once for all, against any further displays on political subjects by our Societies of Medicine.

Since the above was written, we have learnt that the subject is to be re-opened at the Westminster Medical Society, the "levellers," it seems, being discontented with the result of the ballot on the "one Faculty" question. On the first occasion, when a ballot was demanded, and the President stated that it would take place next night, no objection was made;—next meeting came, and still no protest was entered, because, expecting to carry the measure, the radicals held that all was right. Well; the ballot took place, and still no objection was made—nay, a third night came, and the minutes of the former were confirmed without opposition! when, lo! before the meeting adjourned, notice was given of a motion for considering the legality of the ballot, and thus re-opening the question! Can any thing in the world shew more clearly the justice of the preceding observations? That there should be men capable of playing such antics before high heaven!

Another circumstance—scarcely less unique of its kind—which marked the proceedings of the evening, consisted in a laboured lachrymose address entered into by Dr. James Johnson, in reference to certain articles which have recently appeared in this journal. It is certainly highly flattering to find that our observations are deemed worthy of occupying the attention of the Westminster Medical Society; and though we think that it was very prudent on the part of our contemporary to make his attack upon us where he knew there would be none to answer him, yet we must crave leave to doubt the advantage of suffering such irrelevant matters to be introduced, even by way of a diversion, amid graver business, as well as to question the entire impartiality of receiving mere *ex parte* statements, or the absolute wisdom of the President (Mr. Pettigrew) in volunteering an opinion thereupon. Of certain other violations of usage and etiquette, in the way of personal allusions, we say nothing; for these are only matters of courtesy and taste. Lighter pastimes engage us this week; but if we see occasion, we shall return to the subject in a future number*.

MEDICAL REFORM.

It is satisfactory for us to be able to state, which we do on the best authority, that the plan of abolition—we cannot call it reform—lately brought forward at the Westminster Medical Society, did not originate with, and is not approved of by, the parties who have taken the most active interest in the House of Commons in the concerns of our profession. All members of parliament endowed with common sense will take the same view of the subject as the honourable representative of the Tower Hamlets. (See the excellent anecdote in our number of Dec. 7th, p. 375.)

* When an individual is alluded to as having written any article in this journal, we conceive it to be his business, not ours, to admit or to deny it; it is, however, rather amusing to us to observe Dr. Johnson's inference, seeing that the three last leading articles, which have annoyed him so much, were each written by a different person, though of course, by adoption, they all become OURS.—ED. GAZ.

PECUNIARY CLAIMS FOR PROFESSIONAL APPOINTMENTS.

We are indignant to find that the odious principle of buying and selling medical places in public charities has been once more put in practice in the metropolis within the last few days. The vacancy left in the Royal Infirmary for Children by the resignation of Dr. Copland, being contested by two candidates, one of them made 100 new votes the night before the election, and succeeded after all by having no more than 39 of a majority; while the other candidate, though he had the support of above 200 —all old electors—yet having purchased none, was defeated. In a strictly legal sense there is nothing improper in this, for the law of the institution exists, and was well-known to all the parties; but we cannot help expressing our surprise (to use the gentlest term), that any medical man should have availed himself of a principle so recently and universally condemned by the sense of the profession throughout the kingdom. Nothing is more clear than that this unjust practice (unjust both to the profession and to the public) can never be abolished except by the co-operation of medical men; for as long as candidates for appointments will offer themselves with purses in their hands, the claim of the highest bidder will always be paramount with non-professional electors. In the present instance it would, no doubt, have been quite a triumph for the managers of the charity, if, together with the 100 guineas of the one candidate, they had secured the election of the other; or better still if both candidates had been fleeced, with the latter result. As it is, however, they have found a purchaser—perhaps all that they immediately cared for—and lost the candidate who was content to rest upon his merits.

CLINICAL LECTURE

ON

FRACTURE OF THE SKULL.

Delivered at the Middlesex Hospital,

By Sir Charles Bell.

[Before lecture Sir Charles Bell requested the pupils to look at some dissected parts which were placed before them, and to make their own comments on them, as they should be the subjects of lecture in due time. These parts were, a section of fractured spine, in which the body of the twelfth dorsal vertebra had been broken, and a portion thrust against the sheath of the spinal marrow; and a fractured thigh-bone in a cancerous patient.]

The woman from whom this fractured thigh-bone was taken had the right breast amputated by a surgeon in the country. Upon her coming to the hospital, the cicatrix was open, and the whole front of the chest was studded with small round tubercles, of a cancerous nature. The right arm, including the shoulder and the arm-pit, and as far down as the elbow, was similarly occupied with these tumors, and the hand and fore-arm were greatly swollen. This was a young woman compared with the other patients in the cancer-ward; and in a patient who is young the disease makes rapid progress, compared with what it does in those who are older. Two months before her death she made a slight slip whilst walking across the ward, and after that time she complained of pain, and was unable to get out of bed. This pain she described as rheumatic, and as situated in the left hip; but there was no suspicion entertained by any one, not even by herself, that she had suffered fracture of the thigh-bone. She died exhausted with true carcinomatous disease; and you will please to mark its character in the mass that surrounds the bone. It was found that the thigh-bone had been fractured external to the capsule of the hip joint, and through the trochanter major. The fractured portions were still loose. Upon making a section of them, a large portion of cancerous substance was seen connecting the broken pieces, and also imbedded in the central part of the femur. Upon slicing down the cancerous part with a knife, there was in some places an intertexture of bony substance within it, that gave a gritty sensation when the finger was carried along the surface; but in other parts the substance was of that cartilaginous, or gelatinous elastic character, which distinguishes the true carcinoma. Upon cutting into the integuments, covering the chest and the arm, small round tubercles were found, which were composed of the same diseased structure that was discovered in the seat of the fracture; and these tubercles were thickly scattered in the muscles, reaching even to the bones. The parts were all so much thickened by these tumors imbedded in them, that the integuments could not easily be detached from the muscles; and the skin, on being lifted, was quite firm and inflexible. When the arm was drawn from across the chest

of the dead body (now observe this), so as to pursue the dissection, the humerus broke at the cervix, the bone being included in the centre of the disease, but not itself immediately affected with the morbid growth. The cancerous matter was discovered in the ribs and in the pelvis, imbedded in the centres of the bones.

Now I must not enter on the subject connected with this dissection, for I wish, some day, to review the whole of our practice and experience in the cancer-ward; but I am desirous to direct your eye, in the meantime, to the very curious effect of the disease on the bones, that you may see how rapidly the cancerous diathesis or disposition produces its peculiar action in a part that is fractured or injured.

FRACTURE OF THE SKULL.

We shall now take up a case of fracture of the skull, and enter on our proper subject. It is of the greatest importance to you—and I may say, indeed, of the greatest importance to society—that you should be well informed on this part of practice. And, without offence, let me tell you that it is possible for one to pass what is called "a good examination" at Surgeon's-hall, and still be very deficient in the knowledge which may constitute him a safe surgeon. I can especially conceive, I say, a gentleman educated for the profession, but ill informed on the principles which should guide him in this important department of practice, carrying down to the country a beautiful set of trephining instruments, with a tingling desire to be using them. He is a most dangerous neighbour, and God protect the man who is stunned by a fall from his horse in his circle of practice; for, mistaking the cases, he is apt to think most of the operation, and to apply these instruments where they are far from being needed. I have myself been called into consultation where the patient was lying in the insensibility of fever, and where the surgeon had prepared his instruments to apply them to the tuberosity of the occiput—the natural projection there! I have known an instance where an unfortunate gentleman, falling and suffering from concussion, has been immediately trepanned. Now I entreat you to recollect that this operation, though you perform it *secundum artem*, is still a most formidable wound. Would you not say that the man who had the scalp torn down, the pericranium abraded, the bone perforated, and the membranes of the brain exposed, was in a state of great danger? There can be no doubt of it; and it is right that you should take this view of the matter, because you have always to balance the dangers of the operation with the risks of the original condition of the patient:—you have to determine whether you had better run the chance of the first injury, or run, perhaps, the double chances of the injury conjoined with a compound fracture. I say a compound fracture, for the same principle applies here as in fracture of a long bone. A fissure will heal when covered with healthy integument, which will go into suppuration, and be attended with erysipelas, perhaps, when exposed. You know that the parts, though injured, being still covered by the integument, go on quietly in a process of cure without inflammation and suppuration; but if the integuments be opened, then you must have suppuration, and run all those hazards which come of ill health and confinement when reflected on an open wound.

I conceive it, then, to be of the utmost importance that you should not only notice those cases which pass under your eye, but that you should carry with you certain principles. Now I would say that the brain—for it is the important organ, the brain, that gives interest to the subject—may be injured directly, or it may be affected through the circulation. Try this distinction; try how far it will serve the purpose of arranging facts preparatory to reasoning upon them. Say, then, that the brain may be directly injured. What is the meaning of that? It is, that when a person receives a knock on the head, or falls with the head to the ground, the proper matter of the brain receives an impulse which you call *concussion*, and the effect of that impulse, or concussion, or vibration, running through the whole substance of the brain, is, more or less, insensibility; that is, the effect is general; he staggers, and is sick from the slighter degree—he lies insensible from the greater. We shall presently see that the injury may also be local. The blow may be of such a kind that a part only of the brain is hurt, and then the most remarkable phenomena of all is, the absence of phenomena—the absence of symptoms altogether, although the organ be deeply, and perhaps irrecoverably, hurt. There is nothing more remarkable—more necessary for you to take with you to this discussion (for discussion, I fear, it must be) than this, that the brain being injured partially, there is no consequent symptoms as regards the mind; whereas, if the disturbance be general, there are always effects more or less distinct. It will not do, perhaps, to let the public know the manner in which I have studied the subject,—that I struck the head of the dead body to try what was the effect of different forces on the skull. Those not of the profession would be horrified at the idea of thus abusing the dead body; but you, who know the important matter at issue—that it is a question not

of the life and death of an individual, but of the life, and health, and well-being of thousands—will perceive the means to be innoeent and commendable. Now, then, if you allow the dead body to fall from the table upon the flags, what effects have you? Not a depression, but a great rent across the skull. If, on another body, you take a wooden mallet, and strike the head, you have again a rent aeross the skull; but if you take a eommon hammer, the bone gives way without a long extended fissure, and the portion is broken off, indented, and forced in. These are opposite conditions of the fraetured bone, not aeeidental, but consequent on the nature of the force acting. In the same way, if you take a leaden bullet, and attaeh it to a stick and a string, so as to give it velocity, and strike the head, you will have the bullet forced into the skull, as in the case of gun shot, and the skull broken into twenty small pieces, all within the diameter of an inch. You will have no stellated fissure, as when a stone is thrown, and strikes the skull. What does this deelare to us? Does it not shew, that when we have the right data, sueh as the form of the skull, and when we have the other additional data, the shape, weight, and velocity of the body striking it, we ought to be able to reason and to say what will be the eonsequences? But in opposition to this mode of proceeding, the form and extent of the fracture, and the degree of influenee whieh the injury will have on the brain, are considered things aecidental. When a man falls heavily on the ground, there is a rent without depression, but then there is a vibration running through the whole substance of the brain, and the patient is in a state of coma or stupor; but if a man be cut down with a sword, which goes through the skull and membranes, and bites into the brain itself, there is no symptom, because, although the instrument has reached the very organ of the mind, it has reaehed only a part—it has affected only that portion; the vibration has not gone around the whole, and his senses remain entire.

These are some of the principles that we must take with us under the heads of general and partial injury to the brain, and which are necessary to our understanding the eircumstanees I have to detail in these notes, whieh have been put into my hands.

The next point regards the circulation of the blood in the head. This is a subjeet which you should study, for without studying it you will never be correct in your reasonings. What do Haller and other great physiologists say of the brain? That it has five times more blood eireulating in it than any other part of the body! It signifies not whether it has ten times the quantity, as some say, or five times, as others say, but it is on all hands aeknowledged that there is more blood by a great deal circulating in the mass of the brain than in any other part of corresponding weight. It results from this, that the functions of the brain must be more directly and immediately dependent upon the condition of the eireulation than other organs; and it follows, that when any ehange takes plaee in the eireulation of the head, it must have more remarkable effects, and show itself by very distinet symptoms. To eontinue: what is the effect of extravasation of blood in the brain? It is not a direet effeet. You know that the brain is incompressible; you cannot eompress the brain: you look and wonder at that. Understand me, then. You eannot eompress water: the highest column will not diminish the spaee which water in a bottle oeeupies, and the bottle will burst before the water ean be eompressed in any, the smallest, measurable degree. Dr. Monro (senior) put a great mass of brain into water to see if it eould be eompressed, and it could not. No force can compress the water;—no force can compress brain, so long as the walls of the vessel withstand the pressure. When blood is effused into the skull, the skull resists the pressure; the skull does not dilate. What is it that this extravasation of blood does to the brain, sinee it eannot press it? Why, it eompresses the blood-vessels; it diminishes the calibre of the vessels; it diminishes the quantity of blood circulating in the brain; it diminishes the sensibility, and all the functions which are derived from a healthy circulation. The powers of the mind are for a time gone, because the vessels are not carrying the blood through the brain with that freedom which is necessary to sustain it in its funetions. I am speaking of the blood extravasated on the surface or base of the brain. If the vessel burst within, pathologists must take into their consideration that there is a tearing of the substance of the cerebrum,—a direct and formidable injury to the part, as well as a suppression of the activity of the circulation. You see, then, that the brain may be affected indirectly through the state of the eirculation by extravasation, which diminishes that circulation. So may it be affected by inflammatory action, which increases the circulation; and one of the most important things to notice in practice is, the combined effect of the rising inflammation upon the state of oppression originally induced by the accident.

I must not go farther into this, because we should be making a leeture on the theory, instead of some little preface to these cases.

You will please to attend to the first case. A woman brings an infant in her

arms with its parietal bone knocked in: just in the manner you would knock in the crown of your hat, so is a large part of the parietal bone of this infant indented and depressed. Nothing is done except the application of some leeches and the exhibition of a purgative. The child is smiling in your face; there is a total absence of symptoms. Now what I would call you to observe, is, the different effects from the different condition of an infant's skull and brain and that of an old person. Suppose that it was an old man who received this blow; you know very well that he would lie insensible. The thing that we have most to admire here, is the beautiful provision which is in the child's head: first, in the elasticity of the bone, and secondly, in the softness of the brain. You know that at first there is a broad strong membrane covering the brain, then the ossific matter is deposited in the interstices of it, and the inside of the membrane becomes dura-mater, and the outside pericranium, so that the skull is a deposit between them. In this early stage there is a fibrous texture of bone introduced, and the bone yields; and by yielding, there is not that degree of concussion, upon receiving an injury, that would take place if the skull were perfect, as in the adult, or old man. The next thing beautiful as a provision is, that the infant's brain is not in the same condition with that of the adult brain; it is less solid, more yielding. The firmness and dryness which you see in the brain of the adult is not to be seen in the brain of the child; so that whilst nature provides a softer and more yielding condition of the brain, there is at the same time more elasticity in the bones. You know well that the head of the infant yields in birth; and during infancy and childhood, how many are the knocks received upon the head, compared with the instances in old age. These little knocks do not produce that degree of concussion, or of violence to the brain, that would attend similar injuries in an adult; and thus, I say, there is a natural provision for the conditions and stages of life.

Then as to the practice. If you were to make it a rule that whenever a part of the skull is depressed it must be raised by a trephine, what an error you would commit if you attempted to raise it by an operation, in the infant; because, instead of raising the bone from the dura-mater, you would cut through the dura-mater: and this you would do, not merely from the great thinness of the bone, but from the firmness of the attachment of the bone to the dura-mater. Thus, in the first place, there is no necessity for operating; and in the next place, if you refrain, you avoid an evil which is sure to be attendant on opening the dura-mater—a fungus cerebri; the worst accident of all. You may see the child still; for it comes here, among the out-patients, on a Thursday, and the indentation, or dimple, remains distinct.

The next case that you should attend to is that of a woman, who was treated under Mr. Arnott. It is melancholy to see how often these poor creatures are brought in with their head broken, in a state of drunkenness. Now here the party got intoxicated, I presume, and the woman using irritating language to her husband, he takes what is next him to strike her with; and in this instance it was a cast-iron pot, standing upon three legs. He takes up this pot and strikes her on the head, and the foot of the cast-iron pot enters into her skull. Here it broke off, and was drawn from the head by the house-surgeon. It left a round hole through the integuments, and a round hole in the bone itself. There were no symptoms. Why are there no symptoms in such a case? Because the bone has given way. If the bone had not given way—if the bottom of the pot had struck her head—if the force had not been concentrated to a point—then it is possible that the blow might have produced a vibration round the head, and a rent, or a fissure; and then the concussion would have reached the whole substance of the brain, and she would have been reduced to a state of insensibility. But the force being concentrated to a point, and the projecting part entering the skull and pressing in the dura-mater, a partial effect only was produced on the brain, and there were no symptoms. Now comes the consultation. A portion of bone is depressed—a portion larger than can be brought through the hole. The course of events must be watched. It is a dead portion of bone; it will irritate the membrane; inflammation will certainly come on; suppuration will follow, and there is no saying to what an extent that suppuration may proceed. Considering the vascularity of the brain—considering that, of all parts of the body, it is most prone to inflammation—it is determined, although there are no symptoms, but looking forward to what may occur, that the trephine must be applied; that the hole in the outer part of the skull must be made large enough to extract the portion of bone that lies below; and for this purpose a large head of a trephine must be made to embrace the whole margin of the hole.

Now you must reflect how this accident happened. Recurring to these experiments on the head of the dead subject, you find that the outer table, which you remember is fibrous and tough, yields without fracture, or with a portion exceedingly small; whilst the inner table, which well deserves

ıe name of *tabula vitrea*, breaks or splinters xtensively in those circumstances. When ou take a pike, or the blunt point of a word, or even such a point as a bayonet as, or the end of a poker, or the sharp nd of a hammer, and strike the skull of subject, you indent it; and if you then aw off the skull cap and look to the inide, you will find how well adapted the erm *vitrea* is to the inner table. It is plintered—it is broken up, and it may be roken to an inch in diameter, while the ole in the outer part is not perhaps a uarter of an inch in breadth. Now this s not accidental; it is a necessary conseuence of the double tables of the skull. The texture of the bone is for a purpose: t is not a thing of chance; the skull is beautifully and perfectly constructed on nechanical principles. The end being to protect the brain not only against sharp points, but also against concussion, there s an outer table which is tough, an inner able which is brittle, and a cellular diploe between them; such a construction as you would say is least likely to vibrate, because when any thing vibrates there must be a correspondence between the vibrating parts. If you strike a glass, it sounds and vibrates; the whole is of the same texture, and there is a corresponding state of the material. But here you have a soft part, a tough part, and a brittle part; and the effect is just the same as if, on ringing a bell, you put your hand to it and stopped the vibration. This, by the way, to show, as it were, the intention of the structure of the skull, and to illustrate our present subject. The outer and tougher part yields, you observe, and the inner part breaks off; and this does not happen in one remarkable instance, nor accidentally, but necessarily, and in all cases, in a greater or less degree; for you always find, when a portion of bone is broken and forced in, that the shelved edge of the inner portion is of greater extent than the hole in the outer part of the skull. You employ the trephine in order to get your lever under bone, and that you may bring the whole broken portion through the upper part. Thus you see the necessity for this operation; and in the present case it is happily successful. Just ask one of the oldest nurses (excellent authority!) how many instances of successful trephine she has seen; and she will give you but a bad account. Why is this? Because we are, in general, operating where there has been great injury to the brain, and consequently general, destructive inflammation; but here the success is to be attributed, no doubt, in part to the right judgment of the operator, but mainly to the circumstance that the injury is partial; that in good time he trephined the skull, took away the insulated and irritating portion of bone, and thereby stopped the inflammation, which might otherwise have been occasioned.

I might here call your attention, though it is not one of the cases under our observation, to what you see, when you go round the hospital, in the poor unfortunate fellow St. Aubin. There you find a large portion of skull dead, not from a blow, but from disease; you see the matter working through the bone, and, as it were, gradually dissolving it. I beg you to mark that fact, because it proves that the presence of the dead bone, though a source of irritation to the membrane, is not always a fatal source of irritation, if the matter can get out. No symptom supervening in that man, I allow the process of nature to go on, without disturbing the head by violence, without disturbing the bone by an operation. When, however, the dead bone is not only in coutact with the membrane, irritating it, and causing suppuration, but also confines that matter, we must operate. Further, in the instance of St. Aubin there is not only an opening through which the pus oozes freely, but the surface presented to the brain is uniform, and I am not solicitous to take away the bone; but when the edge is rough—when, judging by the outer edge, you know that the inner one is also abrupt, sharp, and pressing on the membranes, then it is a case for operation.

The next case is that of Bateman, who had a fracture of the base of the skull, and is now an out-patient. Bateman's age is 45, and you must be particular in the age, you know, in taking your case, because it implies the condition of the skull. This is a large heavy man; he is brought to the hospital in a state of stupor, and it is found that he had been thrown from a cabriolet upon the curb-stone. The narrative proceeds to state, that he bled from the ear and from the nose. On the following day he was sensible, but very deaf, and he had sounds in his ears, which he compared to the roaring of the sea. He was bled and cupped, his head shaved, a cold lotion applied to it, and a blister to the nape of the neck. This patient was allowed to remain fourteen weeks in the hospital, for it was the conviction of the surgeon that a rent or fissure ran across the temporal bone. As an out-patient he was treated with blue-pill, and had a seton put into his neck. He is now visiting us occasionally, and labours under giddiness and deafness, which prevent him going to work.

You are here to observe the bleeding from the ear and from the nose, which are called symptoms of concussion. I do not know that we should call them symptoms.

Why does the blood pour from his nostrils and ears? It is possible that there are vessels ruptured; that is sometimes the case. Even suppose it is only the membrane of the tympanum which is torn, what does that imply? A remarkable shock. What a shock it must be to the head, which ruptures the membrane of the tympanum, and brings blood from the Schneiderian membrane! What must the brain suffer! Does not the concussion which produces such an extraordinary effect on the outer parts reach the inner parts? You see the connexion, then, between the two circumstances—the bleeding of these outward organs, and the state of insensibility from the condition of the inner organ. It is not that the blood flows from the nose, because he is suffering from concussion; it has no connexion with the brain; it is only that the two parts are equally influenced by the blow. But I conceive that in this case there was a fissure of the skull; the blow which he received was of that degree or kind of external force which produces fissure in the base of the skull. You remember the perfect convexity of the whole upper part of the skull, and its consequent strength; you remember, on the contrary, the flatness, irregularity, and consequent greater weakness of the base; and you comprehend that the vibration from the blow, which does not break the upper part, sometimes tears, or causes a fissure, in the lower. You have not now the data, because we have not the case before us, to consider the curious and practical subject of counter-fissure; but you do find that, when a person falls on the convexity of the head, very often the skull is rent, and the fissure runs through the temporal bone; then the blood is poured out from the nostrils and ears; not from a rupture in the membrane, but from the fracture of the bone. I believe that from the violence of the shock, from several of the symptoms, from the ear being full of blood, from the long-continuance of the effects, that this man was in great danger; and I kept him in the hospital fourteen weeks, under the idea that it would require a very long time to restore the bone, and a much longer time, probably, to restore the condition of the brain itself. I remember a case somewhat like this, both as to the manner in which the accident occurred, and the symptoms produced. The man died, and we had the opportunity of examining the head; and thus we have the gap, as it were, filled up, and the data from which we may reason. This man fell on his head, the vertex coming to the ground; he lay insensible; he had bleeding from the ears, and by and by a quantity of clear, apparently watery, fluid, flowed so freely from his ear as to wet the pillow. And here let me shew you how your knowledge of anatomy may bring you acquainted with the state of the internal parts. This man had lost all motion of the side of the face, implying an injury to the portio dura, as it passes through the temporal bone. Upon dissection we found a fissure running across the base of the skull, and across the temporal bone, and entering the cavity of the tympanum, and tearing across the seventh pair. This fluid which wetted his pillow flowed from the interior of the skull, from the surface of the brain itself. One must be careful, and especially the house-surgeon must be careful in such cases; for when a man falls upon his head with the whole weight of his body, and when, although there be no external injury, there is evidence of great violence, and there are those symptoms which obviously imply injury at the base of the skull, we must be careful not to dismiss the patient rashly. We must recollect what has happened here: a patient has been dismissed; he has walked out of the ward into the Board-room, to return thanks to the Governors; gone back into his ward, lifted his bundle, and bid good bye to his neighbours, and in the instant he fell and expired, without a word or a motion. When the body was examined, it was found that the fracture had gone across the base of the skull, broke off the condyles of the occipital bone, torn the spinal marrow, so that he fell as an animal would fall that was pithed. A circumstance occurred in the hands of our present assistant-surgeon as impressive, and no less important as a lesson. A man having been received with a severe injury of the head, during the night, when the usual assistants were absent, Mr. Tuson and Mr. Hind being then house-surgeons, employed themselves in bleeding and shaving him. Whilst the blood was flowing, it stopped suddenly upon the head being turned in the act of shaving; and to the astonishment of these gentlemen the patient was perceived to be motionless and dead. The dissection shewed the medulla oblongata nipped by the fractured portion of the occipital bone.

The next case is full of interest, and so indeed is every case if you take it in all its bearings. The one which I will point to, as still under your observation, is that of Sarah Weatherstone. She is 37 years of age: when she met with the accident, she was pregnant. She was admitted as far back as the 18th of August, and she is now an out-patient. This woman had been thrown out of a cabriolet. (One of you, I think, counted lately, that we had sixteen cases of accidents from cabriolets and omnibuses, requiring to be admitted in one week.) She was thrown out upon the stones, and lay insensible for several

hours. Although the laceration of the scalp had exposed the skull, and although there was a fissure in the middle part of the parietal bone, I did not trephine. Why? Because I conceived the symptoms and the insensibility were the effects of concussion. You must think of this. What symptoms does fracture produce? You know that fracture of the skull can have no symptoms. If there be symptoms, these must result from some affection of the brain—not from the bone. Now if a person be picked up, as was the case with this woman, insensible, the circumstance of the direct influence shews you that it is the brain which is injured—that it is the vibration, the state of the concussion, which you have to consider; for concussion is distinguishable from all the other conditions, by its being the immediate effect of a blow, and it is the more severe the shorter the time that has elapsed since the accident. Now this woman having suffered by concussion, the symptoms, being continuous or without interruption, are to be ascribed to the violence on the brain, or to the vascular action that is excited by the concussion, and to the effusion that is poured out. Why should I apply the trephine in this case? To be sure, the scalp is opened, and the skull is laid bare, and there is a fissure; but why should I apply the trephine? I did not, because there were present neither the symptoms of compression, nor that form of fracture that implied irritation to the membranes. There was no depression in the bone; the two portions of the skull which were separated by the fissure, were on a level; there was nothing which implied encroachment upon the cavity of the skull, and diminution of the circulation; there was no reason to suppose that the patient was suffering from extravasation of blood; and therefore it was a case of concussion purely, and to be treated as such, without the trephine; and, so far, happily.

She went out of the house with returning strength: she has subsequently been confined, and had a child at the period of seven months. She returns to us with certain feelings about her head that alarm her; she squints, the left eye being prominent, distorted, and her vision dull. I was anxious that she should come into the house. I made interest that she should do so, but she refused, and we shall probably know no more about the case. It is my conjecture that she suffered from concussion; that there supervened a degree of inflammation; that coagulable lymph was thrown out; that the coagulated lymph is now embarrassing a little the third pair of nerves, by being deposited at the base of the brain, the point immediately opposite or counter to the fracture, or rather to the part struck.

But this case leads only to another, and that to a third, and so on. As we are embarked in this inquiry, I will resume the subject at next lecture, being confident that I cannot draw your attention to one of greater practical importance.

MIDDLESEX HOSPITAL.

To the Editor of the Medical Gazette.

Sir,

Should you deem the annexed cases of sufficient practical value and interest to occupy a column of your journal, I shall feel obliged by your giving them an early insertion.—I remain, sir,

Yours respectfully,

G. C.

Middlesex Hospital, Dec. 4th, 1833.

Dilatation (?) of the Bladder.

Albert De la Cowr, aged 76, a jeweller, applied for admission Sept. 10th, stating generally that he had the dropsy.

Upon being questioned more particularly, he complained of swelling and hardness of the belly, with some pain there, and of flatulence. He said that he had been under medical treatment for six weeks, and that his illness commenced with swelling about his ankles.

When he was examined in bed the next day, it was evident that the enlargement was not occasioned by distention of the general cavity of the peritoneum. A large, firm, oval tumor, extending from the pubes nearly to the epigastrium, projected from the central part of the abdomen, as the patient lay on his back. The flanks were loose and unresisting. Pressure caused no pain. Percussion gave rise to a perfectly dull sound over the whole tumor, and to a hollow sound over each flank. Fluctuation, very slight in degree, yet unequivocal, was ascertained by the same means. These circumstances led Dr. Watson to believe that the tumor was formed by the distended bladder; and this belief was confirmed when the patient, on being interrogated as to the condition of his urinary organs, stated that he had no difficulty in making water, but that it dribbled from him involuntarily, and had done so for the last twelve months; and that twelve years before an instrument had been introduced into the urethra to relieve an "obstruction."

Mr. Mayo, after ascertaining that the prostate was not enlarged, passed a catheter into the bladder, and emptied it of five pints of turbid and offensive urine. The tumor subsided as the urine flowed; and the abdomen became flaccid and wrinkled

into folds, like that on women who have borne many children.

The retention of urine had been caused by a stricture of the urethra towards the termination in the bladder, and it was necessary to introduce the catheter repeatedly. About five pints of alkaline urine, having a faint peculiar odour, were drawn off daily

Some difficulty, however, occurred occasionally in the passage of the instrument, and slight bleeding from the urethra took place. The patient and his friends became discontented, and he left the hospital on the 19th Sept. in a weak and uncomfortable state.

The points of chief interest in this case are—the trifling degree of local pain, and of general disturbance, consequent upon so great distention of the bladder—the length of time the distention must have existed before it was detected—and the assistance afforded by percussion in guiding the physician to the real nature of the case.

Peculiar Acute Vesicular Eruption, connected with Scarlatina.

Case I.—Mary Diekman, aged 16, was admitted on Tuesday, 22d October, by Dr. Watson, with sore-throat, and a scarlet rash, very intense in colour, occupying the whole surface of the body. Countenance and manner expressive of great anxiety; pulse small and frequent; tongue clean, moist, and red; bowels reported regular.

She had come from the country to London, in good health, on the previous Wednesday. On Thursday, the 17th, she became affected with headache and sickness. On the 19th she complained of sore throat, and her skin was observed to be red.

On the 22d, the day of admission, a number of small vesicular elevations were noticed upon her neck. On the 23d the vesicular eruption was very thickly scattered over the neck, trunk, arms, and hands: it was less crowded on the legs. It consisted of small prominent heads, which contained a thin, white, opaque fluid. On the 24th the patient was much better; the redness diminishing; the eruption disappearing, in consequence of the absorption of the fluid. Upon the neck the cuticle which had been raised by the fluid was become flaccid and wrinkled, and gave that part of the skin the appearance of being mouldy.

On the 25th the vesicular eruption was almost gone; and the mouldiness, or desquamation, was more extensive.

The only medicine given was carbonate of ammonia in frequent moderate doses. The patient got rapidly well.

Case II.—October 23d, Wm. Holloway, aged 22, was admitted, also with sore-throat, and a scarlet efflorescence over most parts of the body and limbs. He had never had scarlet-fever. Here also a very large crop, of precisely similar vesicles, containing a white opaque fluid, occupied all the parts that were red. It was first noticed on the day of his admission, and it was scarcely perceptible on the 25th.

This man had some pulmonic affection, and recovered slowly. He is still in the hospital.

Case III.—Upon the same day (Oct. 23), John Perryman, aged 29, was brought to the hospital, labouring under scarlet-fever. On the 13th one of his children came home from the country ill of that disease. He sickened on the 18th, and his wife (who remained at home), on the 20th. The colour of the efflorescence was bright; on his legs and thighs were many distinct papulæ, and upon his neck and chest there was the appearance of a commencing vesicular eruption.

On the 24th there was seen, on the right flank especially, the same scurfy, mouldy appearance as was noticed in the case of the girl Dickman. The wife died on the 23d, after this patient came to the hospital. He recovered speedily, and without a bad symptom.

Case IV.—At the same time that these cases were in progress, a patient of Dr. Watson's (Jas. Millench, æt. 50), just recovering from acute rheumatism, was attacked with scarlet fever; and during its progress, numerous vesicles, or rather small bullæ, about as big as ordinary shots, made their appearance on the right side of his chest and abdomen. They differed from the vesicles described in the former cases, in being larger, and in containing a perfectly transparent fluid. Some of them were so full and clear as to look precisely like drops of water; others were flaccid, whitish, and wrinkled.

Case V.—During August last a boy, recently from the country, was admitted, under Dr. Wilson, with the same disease. The eruption was extremely vivid, but no vesicles were noticed on the day of his admission. In the course of the evening his skin became so painfully hot that he begged the nurse would sponge him with cold water. Cold lotion (consisting of a solution of the acetate of ammonia) was used, and on the following morning a crop of the same character of vesicles covered the whole body. They presented the same mouldy appearance when desquamation ensued. He rapidly got well, without a single bad symptom.

The occasional, yet rare, occurrence of a miliary vesicular eruption, simultaneously

ith the efflorescence in scarlet fever, has een noticed by many writers on that dis- ase. It would be satisfactory to know hether such a combination of vesicles, ith the diffused redness charaeteristie of carlatina, as was met with in the preeed- ng eases, has been observed by others uring the epidemic now prevalent in Lon- on and its neighbourhood. In none of hese eases was there any severe affeetion f the throat, or other unfavourable symp- om: but not only in the above cases, but n several others admitted before and sinee hat period, there has been noticed a pe- uliar fœtor of the breath, resembling mer- urial ptyalism; in addition to which, the gums presented that vascularity usually met with in patients under the influenee of his mineral. The individuals were all closely interrogated, in order to aseertain f any such medicine had been administered, but the result was satisfaetorily proved in the negative.

TREATMENT OF CLUB-FOOT BY DIVIDING THE TENDO-ACHILLIS.

SECTION of the tendo-achillis has seareely been proposed, exeept in certain eases of amputation of the foot by the method of Chopart; after which, by the preponde- ranee of the gastrocnemii muscles, the foot was turned backwards. The ope- ration met with little favour, and, besides, the opportunity of performing it occurred but seldom; so that it had, in fact, been lost sight of when Delpech had recourse to it, in the treatment of that variety of club- foot ealled *pied equin*, where the heel is strongly dragged up backwards. It was founded on the important fact, that in all cases of rupture of the tendo-achillis, in place of an immediate reunion, there is formed between the two ends of the tendon a knot (*bourrelet*), which joins them toge- ther; and that, at a later period, this be- comes elongated, so as to increase the total length of the tendon without too much diminishing its solidity. The proeeeding of Delpeeh is known: he divided the skin on each side of the tendon to the extent of an inch; cut the tendon; waited for the healing of the parts, and then applied an apparatus to elongate the tendinous cica- trix. This prevented many ineonvenienees —a painful operation—wounds slow in healing — sometimes exfoliation of the tendon, and elongation of the part only to a certain extent.

Dr. Strömager has endeavoured to avoid all these causes of delay and imperfect suc- ess; he went chiefly upon the fact that cicatrization takes place even where the ends of the tendon are not maintained in eontaet, but with a more eonsiderable elongation. He has given two cases in detail, in whieh the good effeets of his plan were very striking: the first was in a lad, nineteen years of age, who had suffered from elub-foot from the time he was four years old. The leg was emaeiated, the heel very much pulled baek, and the limb useless; while, by the employment of a wooden leg, the knee had been turned con- siderably outwards. Various means of extension were tried, with little effect, dur- ing many weeks, when it was resolved to divide the tendo-aehillis. The proceeding is thus described by the operator. The patient was placed before me on a table, the left side turned towards me; an assist- ant held the knee, while another laid hold of the foot, bringing it into such position as to extend the tendo-aehillis rather power- fully. I then took a eurved and very narrow bistoury, and introdueed it two inches above the insertion of the tendon, between it and the tibia, the back of the instrument being towards the knee, and the cutting edge towards the tendon, whieh was divided with a kind of snap. My in- tention was to make the external wounds as small as possible, to avoid the access of the air, and, if possible, prevent any ex- foliation of the tendon. The apertures eorresponded in size exaetly to the blade of the knife, and the tendon was eut from behind without the wound implicating the skin over it. The retention of the ends of the tendon only amounted to three-fourths of an ineh, and the position of the foot was but little improved. The little wounds were dressed with sticking-plaister, and the foot was kept in a state of extension. On the third day the bandage was removed: the wounds were then healed; the foot did not follow the movements of the upper end of the tendon. Sixth day, the extre- mities of the tendon were united, so that the foot followed the movement of the upper part. On the tenth day the union was so firm that the patient eould move the foot by the action of the calf of the leg. But little interval now existed be- tween the divided extremities, and I then thought it time to proceed to the exten- sion of the new intermediate texture. For this purpose I applied an apparatus, by which the foot was kept at an obtuse angle with the leg. At first great cau- tion was required to avoid lacerating the intermediate bond of union, but after a week more powerful extension was borne. At the end of eight weeks the foot was brought to a right angle with the leg, and by means of a boot, eontrived so as to give support to the weak points, the act of walking could be performed with tole- rable ease and assurance. The muscles of

the limb became more fleshy, and the deformity nearly disappeared.

Another analogous case is detailed, with similar results. — *Rust's Magazin für die Gesammte Heilkunde.*

APPLICATION OF LAUDANUM TO NASAL POLYPI.

Dr. Durr relates the case of a woman who had been subject, for many years, to polypi of the nose, and which were extirpated in consequence of the inconvenience they produced. They soon grew again—were removed once more, and grew a second time. Butter of antimony was then applied, without avail; after which, recourse was had to laudanum, applied with a hair pencil to the polypi. At the end of five weeks they had not only ceased to increase, but were rather less. At the end of two months they were reduced to little dry withered bags: they were taken out at the end of this time, without pain or difficulty.—*Journal der Practischen Heilkunde.*

TARTAR EMETIC AFFECTING THE CHILD THROUGH THE MOTHER.

M. Minaret, of Chatillon-de-Michaelle, while treating a young woman for an attack of pleuritis, had an opportunity of observing the following curious fact. The patient had at her breast a child of four months, and being put on tartar emetic, it soon appeared that the medicine operated on the child as well as the mother. M. Minaret, anxious to ascertain the fact, had the infant put to the breast in his presence; but the milk was no sooner tasted than it proved nauseating; the child shewed every symptom of sickness and disgust, and threw up a quantity of coagulum. Another nurse was immediately procured, and the child was soon recovered. The mother also got well not long after, and resumed the suckling of her infant without any similar bad effects.—*Gazette Médicale.*

LITERARY INTELLIGENCE.

Dr. Ashburner and Dr. P. H. Green are engaged in preparing a *Dictionary of Midwifery and the Diseases of Women and Children*: to be published by Messrs. Longman and Co. This work will be illustrated by Woodcuts and Diagrams, and will be of a form to range with Cooper's and Copland's Dictionaries.

Preparing for publication, *the Study of Osteology*, or History of the Bones of the Human Body. Illustrated by 5 Imperial Folio Plates, from Albinus and Chesclden. By T. Castle, F.L.S. Trin. Coll. Camb.

NEW MEDICAL WORKS.

Pathological Anatomy: Illustrations of the Elementary Forms of Disease. By R. Carswell. Fas. 4 — Melanoma. Fol. 15s. sd.

The Validity of the "Thoughts on Medical Reform, by a Retired Practitioner," considered and elucidated. By an Exercent Practitioner. 8vo. 1s. sd.

Illustrations of Mr. S. Cooper's Surgical Dictionary. By W. P. Cocks. 8vo. No. 40, 2s. sd.

Cases illustrating and confirming the Remedial Power of the Inhalation of Iodine and Conium in Tubercular Phthisis, &c. By Sir Chas. Scudamore. 2d edit. 8vo. 7s. 6d. bds.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Dec.* 24, 1833.

Abscess	5	Hernia	1
Age and Debility	51	Hooping-Cough	14
Apoplexy	8	Inflammation	41
Asthma	19	Bowels & Stomach	4
Cancer	2	Brain	8
Childbirth	4	Lungs and Pleura	8
Consumption	49	Insanity	2
Constipation of the Bowels	1	Jaundice	1
Convulsions	40	Liver, diseased	11
Croup	4	Measles	21
Dentition or Teething	3	Mortification	2
Dropsy	14	Paralysis	1
Dropsy on the Brain	11	Small-Pox	3
Dropsy on the Chest	1	Spasms	1
Epilepsy	1	Stricture	1
Erysipelas	1	Thrush	1
Fever	8	Tumor	2
Fever, Scarlet	20	Venereal	1
Gout	1	Unknown Causes	2
Hæmorrhage	1	Stillborn	14
Heart, diseased	3		

Increase of Burials, as compared with the preceding week . . . 102

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Dec. 1833.	Thermometer.		Barometer.	
Thursday . 19	from 43	to 56	29·71	to 29·57
Friday . . 20	47	50	29·47	29·37
Saturday . 21	34	49	29·24	29 27
Sunday . . 22	43	49	29 26	29·24
Monday . . 23	42	47	29 23	29·36
Tuesday . . 24	40	50	29·36	29·27
Wednesday 25	49	39	29·28	29·82

Prevailing wind S.W.

Cloudy, with frequent heavy rain; which has caused the floods to be much higher than usual.

Rain fallen, 2 inches, and ·575 of an inch.

Charles Henry Adams.

Erratum. — In the note appended to one of the quotations in our leader last week, p. 453, *for* "The italics and capitals in this *paper* are given as in the original," *read* "The italics and capitals in this *passage*," &c.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 4, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XIII.

GENERATION.

Theories of generation. — In the sexual genera of animals, the co-operation of a male and female is required to insure fecundation; — the embryo must therefore originate either from the father or mother, or be formed by an admixture of prolific particles afforded by each. We consequently find that philosophers have ranged themselves under three distinct banners: some contending that the male is the most efficient power in producing the new creature; others, the female; and others, that both sexes contribute a proportionate share. While reviewing the theories of generation, however, we must always bear in mind one principal fact, that the offspring partakes of the nature of both parents; this we see very strongly marked in the mule productions. The children also of the European and African inherit the colour, features, and disposition, of each of their parents in almost an equal degree. It has been remarked, that most children bear a similitude to both parents in external appearance, and in their natural temper and diathesis; they are supposed even to inherit the diseases of both: — thus, if one parent be the subject of gout, and the other of scrofula, the children are said to be predisposed to both. It is therefore now almost universally believed, that the embryo is the produce of an equal effort in both sexes.

This position, however, has been objected to, upon the facts before stated, that oviparous animals may produce apparently perfect eggs without having connexion with the male; and that, in some insects, the female will bring forth a number of fertile generations successively, the result of one copulation; — tending, of course, to establish that she performs by much the greatest share in the work of propagation. But as far as the former of these facts is concerned, the opinion is supported by unsound reasoning; the eggs thus elaborated are not perfect; they are deficient in their very essence — the rudiments of the fœtus; they are composed, indeed, entirely of the fœtal involucra, and the parts destined for its nourishment, which are the produce of common secretion. The extruded egg, therefore, is analogous to, and may be regarded as, a deciduous uterus, formed by secretion from the vessels of the mother, and shed from her body every time it is perfected; for it possesses, when impregnated, not only the principle of vitality, but also the means of protecting, nourishing, and continuing life to the contained embryo, and requires no external aid for bringing the fœtus to maturity beyond exposure to atmospheric air, and the constant application of a certain degree of heat. In no respect, indeed, does it differ functionally from the gravid uterus of the mammalia, except in the expulsive power exerted by the latter to free itself from its contents; — this want is nevertheless amply supplied by the natural instinct implanted in the chick, which induces it to use active exertions to break through the barriers of its prison, for its own liberation.

Another ground of objection has been raised upon the difficulty of determining how the vivifying particles of one sex act upon the vivifying particles of the other. It has been urged that we cannot, upon chemical or mechanical principles, account for the mixture of the semen

of each, or for the formation of that amalgam, if we may so term it, which becomes the living being. The old opinions of the muscular action of the uterus, and fermentation, which were advocated by the celebrated Frenchman, Descartes, producing that amalgamation, are too absurd to require refutation. In such a discussion as we should probably be led into, were we to pursue the sentiments of this philosopher, we must remember that vital actions cannot be explained upon either chemical or mechanical principles; and that the function of generation is perhaps more completely an action of life than any other process in the body. Upon this rock, indeed, many theorists have been wrecked, when endeavouring to illustrate the powers of the different parts of living bodies; the chemists forgetting that they were not experimenting upon unorganized matter in a mere crucible: and the supporters of mechanical principles founding their theory only upon those laws which regulate the disposition of matter in general. We cannot, indeed, explain generation upon the principles of crystallization, or the mere aggregation of newly-formed particles; nor can we depend upon the faneiful doctrine of Valisnieri, or the similar and equally incomprehensible "emboitement" of Bonnet—namely, that the first female of each species contained within her ovaries the rudiments of every individual that ever has been, or ever will be born:—that we have all indeed existed from the time our race was created, and had each a separate space allotted to us in the ovaries of our first parent.*

Although this opinion seems scarcely to deserve mention, it has boasted many advocates, who argued principally on the difficulty of explaining generation, unless we admitted that the germ of every animal was formed at the original creation. We need only consider, that the wild and domesticated races of the same animal differ very remarkably in their fertility, and we shall find a strong argument against the supposition of the germs being formed in the ovary previously to the animal's birth. The domestic sow, for instance, brings forth commonly two litters in a year, each of which consists of from twelve to eighteen: the wild animal, on the contrary, becomes pregnant only once in the year, and the number of its young never exceeds ten. Both reach the same age of about twenty years. The same difference is found to obtain between the tame and wild cats, as also between the domestic dove and wood pigeon. How should the tame animals, which descend from each original wild stock, produce such a remarkably greater number of young ones, if these were merely to be evolved from germs that have existed since the first creation of things?—The vegetable world also will furnish us with a striking argument in our favour. It is well known to horticulturists that the number of seeds is astonishingly increased by culture. Thus M. Dodart, in a discourse in the "Memoires de l'Academie des Sciences," tells us that an elm, if it live a hundred years, will produce naturally about thirty-three millions of seeds; but that if the head and branches be lopped, it will furnish 15,840 millions, or more than 480 times the first number. How he makes his calculation in this particular instance I do not know; but the broad fact is undeniable.

Theories of the ancients.—Many of the ancients treated the subject of generation with acuteness and considerable judgment; it will therefore be worth while to review their sentiments. Plato, indeed,—whose doctrines have been much quoted,—has left us nothing on which to reason: his whole system of philosophy tended to deny the existence of matter. He contended that external objects are only ideal images of the creative power, and that we see every thing in the Deity himself. He confounds physical and final causes; he says that animals and plants were created to populate the earth, and that this globe was formed because the beings created required a place of residence. He considers not only animals, plants, and the elements, but the heavens themselves, as images reflected or extracted from the divine Creator, which images are ever in perfect harmonic concord. The essence of generation consists in the harmony of the number three, or of the triangle—viz. that which generates, that in which generation is performed,

* Some of the microscopic animalcules of infusions, particularly that species called *volvox*, first discovered by Leeuwenhoeck,—which is described as being round, consisting of a pellucid membrane containing a yellowish transparent jelly,—has been brought forward in support of this opinion. Within its structure are seen a number of small globules, said to be ova, containing others again within themselves, like a nest of pill-boxes. Some observers have discovered the young for five generations, included in this way within the body of a common parent. Spallanzani relates that he has been able to discern three generations, and has traced them in their growth, seen them leave the body of their parent, and exhibit all the phenomena proper to their kind. When all the first generation of globules had been expelled, the common membrane or mother burst, and disappeared. In the meantime, the new *volvoces* increased, as likewise did the included globules;—these in their turn possessed independent existence, and their parent burst and was lost to the sight. By isolating the young in succession, he arrived at the thirteenth generation. Bonnet adduces arguments also from the vegetable kingdom; he states that seeds are often shut up thus within each other, and that in the hyacinth the germ has been observed to the fourth generation.

and the result, or that which is generated. Nothing exists without a reason, and every thing is created with a view to the perfection of the whole. We cannot but be impressed with veneration at the sentiments of Plato; his conceptions are sublime, noble, and full of simplicity, but afford no grounds on which we can reason. He paints ideas only:—one cause, one mean, one end, compose the whole of his philosophy. God is the cause, perfection the end, and harmony the means employed. Metaphysical speculations have every where engrossed the place of right reasoning; and he flies from tangible objects into regions of fancy, whither it is impossible for the human intelleet to follow.

Of all the hypotheses circulated by the older writers, that of Aristotle must appear in this age to be the most absurd. Aristotle was one of Plato's pupils, and was preceptor to Alexander the Great, who himself,—although powerful and ambitious to the last degree,—frequently banished from his mind the cares of empire and the thirst for conquest, to seek recreation in studying the history of nature. Considering the advantages which Aristotle possessed under Alexander, we cannot but wonder that he contributed so little to science in this particular. He says that the female sheds a seminal liquor within the body, which he does not consider as prolific; and he tells us that the menstrual fluid serves for the formation, nutrition, and growth of the fœtus. He considers the menstrual *blood* as the matter from which the child is produced, and that the seminal liquor of the male bestows life and form upon that which was previously an unorganized substance. He believes that the male semen is to generation what the sculptor is to a block of marble;—the seminal fluid being the sculptor, the menstrual blood the marble, and the fœtus the figure;—the seminal fluid bestowing upon the menstrual blood a kind of soul, which gives it life and motion. Averrhoes, Avicenna, and other philosophers who embraced this opinion of Aristotle, have also endeavoured to prove that females have no prolific liquor, but that they are furnished with a menstrual fluid which is both necessary and sufficient for the purposes of generation. We cannot but perceive that these philosophers endeavoured to account for a function common to all animals, by calling in the aid of a phenomenon peculiar to one class. Woman is the only menstruating animal, and the power of reproduction is extended to most organized beings.

Hippocrates, who was seventy-five years older than Aristotle, taught an opinion which was adopted by most physicians, for many ages. He maintained the existence of a seminal fluid, and even that the male and female had each two fluids, one strong and active, and the other weaker and more sluggish. He says that the male semen is secreted by the strongest and most essential fluids of the body; that it mixes with the female semen within the uterus; and as each sex has two species of fluid, if both furnish the strong kind, a male fœtus is the consequence; if both the weak kind, the result is a female;—besides, if in the mixture there are more particles of the male than of the female fluid, the child will resemble the father more than the mother, and *vice versâ*. But we might ask what would happen if the fluid of the one was strong, and that of the other weak?—It is impossible to suppose that any rational answer could be given to this question, and we are therefore warranted in rejecting the opinion of two distinct fluids in each sex, as perfectly chimerieal. These two great men have each had their disciples. Almost all the philosophers of the schools adopted Aristotle's theory of generation, whilst most physicians adhered to that laid down by Hippocrates; and in this manner seventeen or eighteen centuries passed without the appearance of any thing new on this mysterious subject.

Theories of the moderns.—At last, upon the revival of literature, some anatomists began to investigate the nature of generation; and Fabricius ab Aquapendente was the first who made experiments on the impregnation and hatching of eggs. This led to the introduction of the ovarian doctrine, which the celebrated Harvey so strongly advocated. Harvey, as you know, was the discoverer of the circulation of the blood, and his works hold one of the highest places in physiological literature. He was physician to the unhappy Charles the First; and although living in those turbulent times, found means to prosecute his studies with unremitting diligence, and possessed the capacity of relating his discoveries and opinions in a most clear and satisfactory manner. His experiments were extensive and varied, and he had opportunities of investigating generation which no one else, perhaps, ever gained. Through the munificence of the king he was allowed to kill, in the Royal parks, as many female deer as he thought necessary for the advancement of science. With this liberty he did not remain idle; yet even Harvey completely failed in illustrating this subject. He arrived at the conclusion, that generation is an operation of the uterus alone, for he satisfied himself that not a drop of semen ever enters it. The uterus, says he, conceives by a kind of contagion communicated by the male semen; and as iron becomes possessed of the magnetic virtue by contact with the load-

stone, so the whole of the female body becomes fecundated by the male semen; although the uterus alone is capable of conception, in the same manner as the brain has the sole power of conceiving ideas. This is giving no explanation; it is endeavouring to account for an obscure action by referring to others equally obscure and inexplicable.

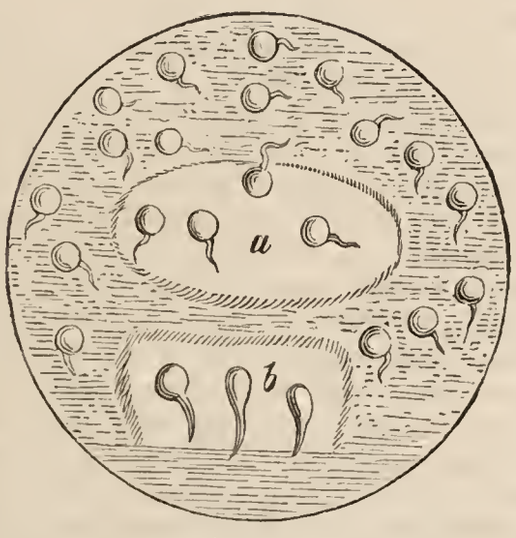
The next theory which I shall mention, more for its singularity, and as originating from a highly-gifted naturalist, than for its general adoption, is that of Buffon. He considered the animal and vegetable bodies as composed of two distinct organizations —one brute matter, as the water, salts, and such perishable parts; and the other of *molecules organizés*, or organic particles,—original, incorruptible, animated, and always active;—each of which organic particles is supposed to be a perfect model, or likeness in miniature, of the body in which it exists. He argues, that if a carnivorous animal takes part of a dead body into its stomach, the flesh of the animal consumed supplies the necessary food, while the organic particles swallowed produce animals similar to the one into whose system they have been received. He endeavours to strengthen this singular hypothesis by saying, that if any part of a dead animal be laid upon the ground for manure, we soon observe it covered with insects, which are produced by the organic particles contained within the dead mass, and which are called into life by a hidden, though natural cause. This phenomenon, however, may be explained in a much easier and more comprehensible method. We know from microscopical observations, that the whole system of nature abounds with living beings, many of them so minute as to escape detection by the naked eye;—we know that all insects possess sufficient instinct to deposit their eggs in the place most suitable for the development of the germ contained within;—we know that bodies under a state of putrefaction give out a considerable degree of heat, which is the most favourable circumstance towards calling into action this dormant vital power; and we may reasonably infer—first, that insects would choose such a receptacle for their ova—and, secondly, that eggs deposited in such a place would more quickly and more certainly be hatched, than if dropped in any other situation. In applying it to the vegetable world, he has determined that the organic particles accidentally or designedly laid upon the earth, become taken up by the vegetable fibres imbedded in the soil, and are assimilated into the nature of the vegetable itself, traversing the system of the vegetable, and ultimately forming the seed, from which a new plant of the same species may be raised. Quite as chimerical is his application of this theory to the animal creation. In the human subject, for example, he supposes that a child is capable of assimilating such nourishment as is fitted for the growth of the body, and that the organic particles tend also to increase its bulk;—when the body has arrived at maturity, the parts of generation require all the surplus for their evolution;—when they are sufficiently evolved, the surplus is laid up in the testicles and ovaries, which detain the organic particles, and convert them into the first rudiment of the animal itself. He supposes that both the male and female possess the organic molecules, and that generation is effected by an incomprehensible admixture of these bodies. Such is the system laid down by Buffon, who employed much of his time upon the subject. He has left us, in this instance, the finest possible proof of his great reasoning powers, by leading us insensibly to adopt opinions, which at the first glance we should look upon as unworthy serious consideration. So artfully, indeed, is the whole treatise written—so striking are his alleged facts —so reasonable do his arguments appear —and so logically drawn are all his inferences, that on perusal it requires us to pause and consider the data which he gives, lest we should be hurried away by the overwhelming force of his eloquence.

Were I inclined formally to refute Buffon's arguments, I should deny the existence of these organic particles which circulate through the body; I should require additional evidence of their presence, and a reasonable proof of the influence ascribed to them. As it is, we can merely consider it as an overstrained speculation, proceeding from an active and comprehensive mind.

Of those philosophers who contended that the male parent was the chief agent in the business of generation, Pythagoras, who lived between five and six hundred years before the Christian æra, was perhaps the first. He imagined that a vapour distilled from the brain and nerves of the male during coition, from which similar parts of the embryo were formed; and as these were supposed to be the seat of the soul, the senses were derived from them, while the grosser parts were produced by common secretion. He asserted that the only power which obtained in the formation of the new being emanated from the male; and observed, that as seeds are sown in the earth, and grow up to perfect plants, so the semen is sown in the uterus, takes root, and increases, until such time, as being fully formed, other means become necessary for the continuance of its life. Galen followed in part the hypothesis of

Pythagoras, differing most materially in this respect from his great original and prototype, Hippocrates.

Such sentiments are perfectly in unison with the degrading ideas of women that even now pervade the eastern world, where they are considered as only subservient to man's pleasures and caprices,—unworthy to share his confidence, his knowledge, or even his rational amusements. It is not surprising, when we consider the great influence the name of Pythagoras possessed in ancient Greece, that the disciples of his school should have adopted the opinions their master entertained, nor that these should have continued through many ages as the leading notions; but it was scarcely to be expected that the same idea should be renewed in modern times. The discovery, however, of supposed seminal vermiculi by Leeuwenhoeck, a Dutch physician,—who has rendered much service to science by his microscopical observations,—has restored this previously-exploded doctrine. These minute animals were first pointed out to Leeuwenhoeck by a youth named Lewis Hamme, in 1677; and he sent, in the same year, an account of the phenomenon, with drawings, to Lord Brouncker, the President of the Royal Society of London. The communication was received by that learned body with great applause. The facts were shewn, by Hooke, to King Charles the Second, and admitted by most observers. Very soon they were examined and described in France; and as far as demonstration of their presence went, they were universally received by the philosophic world. These animals were described as possessing a large head and a slender body, terminating in a tapering extremity or tail, in form nearly resembling the tadpole; but so exceedingly minute that Leeuwenhoeck estimated their length at the three hundred thousandth part of an inch, and calculated that ten thousand of them could be contained in the space covered by a grain of sand. They were perceived to be in constant motion, oscillating from side to side, and progressing by means of these oscillations: they were said to retain their vitality for three or four hours, at the temperature of 80°, when exposed to the air; but at the same temperature, if kept *in vacuo*, for more than two days. You have an opportunity of seeing in this plate of Spallanzani the vermiculi, as he describes them:—



a, represents their appearance directly they are taken from the body;
b, after the lapse of 23 minutes; when their form has become more oblong, and the appendage, or tail, thicker at its connexion with the body, than at its other extremity.

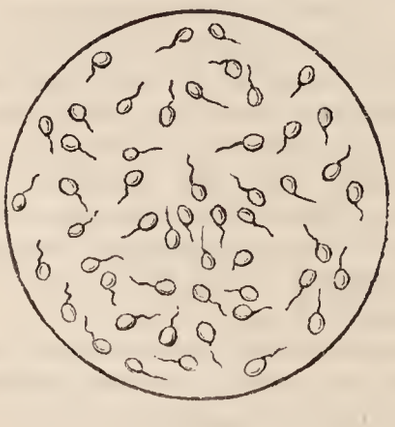
Some philosophers, indeed, considered the appearance detailed as a phantom of the imagination, or an imperfection in the microscope; others judged the Dutch naturalist with less severity, admitting the presence of such bodies, but rejecting his reasoning. It was alleged that these vermiculi were not peculiar to semen, but were found in all other animal fluids. Spallanzani, however, as well as Prevost and Dumas, have shewn, by more accurate investigation, that they are peculiar to the seminal fluid. Spallanzani remarks that there are no parts of the animal body which, when infused, do not give existence to a particular kind of animalcula. They are produced (says he) indifferently, by the muscles, brain, nerves, membranes, tendons, veins, and arteries. The same holds good of the milk, chyle, saliva, serum, blood, and other fluids of the body, mixed with water, or even by themselves; but he says also, that there is an essential difference in the form and appearance of such animalcula from the seminal vermiculi. It has also been observed, that even in vegetable infusions millions of vermiculi are apparent. In speaking of these little animals, M. Bonnet remarks, "The seminal vermiculi are, of all animalcula of liquids, those which have most excited my curiosity: the element in which they live, the place of their abode, their figure, motion, secret properties, all, in a word, should interest us in so singular a kind of minute animated beings. How are they formed there? How are they propagated? How are they developed? How are they fed? What becomes of them when the liquor they inhabit is returned by the vessels and mixed with the blood? Why do they appear only at the age of puberty? Where did they exist before this period? Do they serve no purpose but to people the fluid through which they are so largely scattered?"

The same mode of reasoning has also engaged other philosophers, and all have been struck with the great loss of life that

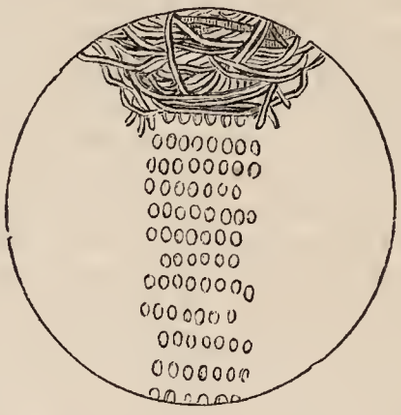
must inevitably ensue if each of these countless animated specks had been designed to form a perfect being, and with the waste which such a profusion would entail on nature. This was an objection to the universal adoption of Leeuwenhoeck's theory. The circumstances also before noted, appeared to prove that the male was not the only power which obtained in the formation of the fœtus.

Buffon, some time after Leeuwenhoeck's theory became promulgated, instituted a series of microscopical experiments, to ascertain the existence of the seminal animalcules; and in every respect confirmed the assertion that numerous bodies were obvious, moving rapidly through the fluid, but denied that they were animals. He said, that what had been considered as their tails were merely adventitious filaments of the mucus which they inhabited; that, in fact, they were oval bodies, and nothing more than the organic particles; and accounted for their being found there in such numbers, because the seminal fluids were the parts from which the new being first sprung. The celebrated Needham also, who enjoyed the intimacy of Count Buffon, engaged himself in experiments on the same subject; and adopted his friend's notions, with slight modifications.

Buffon has given a number of plates in his "Experiments on Generation," for the purpose of substantiating his opinions, and subverting the doctrines of Leeuwenhoeck. His observations were made on fluid taken from the spermatic vessels of a man directly after having suffered a violent death, as well as from other animals. He states that he observed the bodies in dispute emanate on all occasions from a part of the viscid secretion;—that they mostly drew filaments out of it after them, from which they laboured to disengage themselves;—that these threads were of different lengths, and seemed to impede their movement, which was progressive and vibratory. In this plate you will observe the appearance, as noted by him, when they had perfectly gained their freedom, soon after the fluid had been obtained.



In the second he shews the same "particles," after the lapse of eleven hours, when the semen had become more liquid by exposure. He then noticed that they appeared perfectly oval, divested of their supposed tails, arranged themselves in regular order, passed rapidly over the field of the microscope, and were evidently supplied in very large numbers from "a kind of mucilage, or net-work of filaments."



In spite of the opposition it met with, Leeuwenhoeck's theory would probably have obtained universal credit, had not, nearly about the same time, the ovarian system gained ground, which taught an exactly contrary doctrine—namely, that the child exists in the female ovary, and that the stimulus excited by the semen during coition impresses upon this hitherto dormant speck vitality, and the power of growth. This theory arose in consequence of the experiments of Fabricus, and has been followed by Haller, Spallanzani, Hunter, Haighton, and many other eminent men. Mr. Hunter, who employed his great mind unremittingly upon the investigation of generation for a length of time, never could detect the male semen within the uterus; he consequently inferred that there was no necessity for the actual contact of the distinct fecundating particles of the male and female, but that impregnation was effected by a peculiar and most subtle aura emitted from the male semen, which, being carried along the fallopian tubes, produced all the effects of a successful copulation. Nearly analogous to this opinion are the views of Valisnieri. Spallanzani, however, by a number of very ingenious and varied experiments, principally upon frogs, has refuted this idea of the aura seminalis. He submitted some frog's ova, which he collected for the purpose, to the aura of recent frog's semen, and observed, after a few days, that instead of becoming hatched, they all putrified. He then touched some other ova with the semen much diluted, and found that in this way he could impregnate almost every ovum on which he dropped the least par-

ticle of fluid; although it was diluted in the proportion of three grains of semen to a pint and a half of water. Thus, from these experiments, Spallanzani concluded that the aura had not sufficient power to cause conception, but that actual contact of the prolific particles was necessary; and imagined that the male semen was absorbed by the surface of the vagina and carried to the ovary, to instil life into the ripe ovum. Bartholin, Stenonis, and Johnson, were of the same opinion, and contended that impregnation had sometimes taken place where the hymen was imperforate, and that this was a proof of the vaginal absorption. In answer, we might observe, that in the cases brought forward, the hymen, although it had never been ruptured, was not truly imperforate, and that there is no necessity, therefore, to have recourse to the agency of the absorbent machinery.

Physiologists have not yet agreed whether the semen ever enters the uterus and fallopian tubes; and consequently all explanation of the mode in which it cooperates in conception must be in a great measure hypothetical. Harvey, De Graaf, and many other observers, say they never could trace any semen in the uterus. De Graaf even observes he never found it in the vagina. Morgagni has seen the seminal fluid in the uterus. Galen says he always discovered it in the uterus of brutes after copulation, and Leeuwenhoeck in the case of rabbits. Ruysch says he found it both in the uterus and tubes of two women, killed in the act of adultery. Haller once found it in the uterus of a sheep, forty-five minutes after coition; and Fallopius frequently found it in the tubes. Haller remarks, that those who supposed they saw the male semen in the uterus, probably discovered mucus only; but still he inclines, with most physiologists, to the opinion that the semen is received into the uterus. From such testimony we may reasonably infer that the seminal fluid does enter the uterus, and probably the tubes, however experimental authors may differ in their accounts.

Buffon has denied, *in toto*, the system of eggs, and consequently calls the ovaria by the name of female testicles. He attributes to the ovaria exactly the same functions as the male testes perform—that of secreting a prolific seminal fluid—and says the only difference consists in the structure of each gland and in the quantity of the fluid secreted. He contends that the vesicles of De Graaf are not ova, but small cysts, containing true semen, in which he professes to have observed frequently the same "molecules" as in the seminal fluid of the male. He supposes the vesicle bursts by the force applied, and ridicules the idea of the vesicle passing entire into the cavity of the tube, because it is many times larger than the aperture through which it has to pass; and because the product of conception is not observable for many days: this could not be the case if the ovum, which we can see perfectly distinct in the ovarium, entered the tube whole. He attempts also to account for the difference of sexes by considering that each individual contains only the organic particles of their own sex; so that if the organic particles of the female are most abundant, a female is produced, and *vice versâ*. By this amalgamation or accretion of the organic particles, he supposses he has satisfactorily explained the likeness of the child to both parents.

Dr. Haighton maintained that conception depended entirely upon sympathy;—that invaluable power which physiologists always call to their aid when they find themselves at fault in explaining any phenomena not evident from direct anatomical structure. "I think it must appear," says he, "in tracing nature's steps through the different stages of generation, that they are the product of that law of the constitution which we call *sympathy* or consent of parts —that the semen first stimulates the vagina, os uteri, or cavity of the uterus, or all of them.—By sympathy the ovarian vesicles enlarge, project, and burst;—by sympathy the tubes incline to the ovaries, and, having embraced them, convey the rudiments of the fœtus into the uterus;—by sympathy the uterus makes the necessary preparations for perfecting the formation and growth of the fœtus;—and by sympathy the breasts furnish milk for its support after birth."

Blumenbach reasons more philosophically: he supposes that there exists in all organized bodies a formative power, which he designates by the term of *nisus formativus*. This nisus formativus is particularly strong in the male semen, and is developed during conception. "We therefore think it probable," he says, "that those fluids which, during a successful coition, are thrown into the cavity of the uterus, require a certain period for becoming intimately mixed, acted upon, and matured; that after this prepatatory stage, the nisus formativus is excited in them, vivifying the hitherto shapeless spermatic matter partly into the beautiful containing ovum and partly into the contained embryo." From this quotation he seems to grant the male semen the greater share in the work of propagation; but after all it explains nothing, and is merely another view of the *vis plastica* of the ancients.

I have thus enumerated the chief hypo-

theses of generation; and, conflicting as they are, it would be difficult to select any one as being most agreeable to truth. I shall content myself with remarking that there is no question that the testes of the male and the ovaria of the female supply the prolific matter for the formation of the new being; and that each sex contributes towards that formation. I presume that in every copulation, the fimbriated extremity of one or both fallopian tubes seizes upon and embraces its respective ovary externally: that if there be a vesicle matured on the surface—if the fimbriæ close upon the part of the ovary where that vesicle is situated—if the grasp of the fimbriæ be sufficiently strong, and if the peritoneum covering the vesicle be thin—the vesicle itself will burst, and its contents pass into the cavity of the tube;—that if in the tube it meet with a portion of the male semen, the result is the formation of the embryo. I cannot suppose that conception consists in the evolution or vivifying of a part already existing, but think it far more probable both that actual contact of the male and female prolific particles is required, and that a new formation really occurs.

Accidental barrenness, or the unfruitfulness of any particular connexion, then, may be produced either by a vesicle not being sufficiently matured for impregnation—by the fimbriæ not coming in contact with the vesicle, although it be matured, in consequence of its embracing another portion of the ovary—by its grasp not being sufficiently powerful to cause the peritoneum and the coats of the vesicle to burst—or by the contents of the vesicle, even if they should pass into the fallopian tube, not coming into contact with any particle of the male fluid. It is evident, if these ideas be correct, how many chances there are against any one connexion being followed by impregnation. It may be adduced in opposition to this opinion, that in the lower animals an unfruitful connexion seldom occurs. Nor does this fact appear to me difficult of explanation. In the first place, there are many more ova ripe for impregnation in the multiparient animals than in the human female; so that the fimbriated extremity of the fallopian tube cannot grasp any part of the ovarium without meeting with one or more vesicles which may be fecundated. Secondly, the fimbriæ are larger, and we may therefore suppose that they embrace a greater surface; and lastly, from the higher degree of muscularity in the fallopian tubes, we may presume that the grasp is proportionably more powerful.

By such reasoning, then, I would endeavour to explain the strikingly greater aptitude for conception in the lower animals than in woman.

Concluding summary.—From this view which we have taken of the subject, generation may be said to consist of four functions: first, the production of prolific particles, which is a constant circumstance;—secondly, fecundation, which belongs to the sexual genera of animals;—thirdly, copulation, which is confined to those sexual genera in which fecundation is accomplished within the body;—and lastly, utero gestation, which belongs exclusively to viviparous generation.

ON

SARSAPARILLA.

By Richard Battley,

Chemist.

Sarsaparilla is distinguished in the London market by the names of Lisbon, Honduras, Vera Cruz, Jamaica, and Lima; it has been very lately brought from Bombay, and still more recently from Sierra Leone. These several kinds are evidently the roots of more than one, probably of not less than five species.

The African differs considerably from the others, consisting of perfectly smooth and flaccid fibres, having a brown leathery bark loosely surrounding a very thin woody centre, and arising from a solid mass termed the chump.

The Lisbon root is the produce of Brazil; it has a smooth dirty-brown cuticle, and contains, both in the bark and pith, a very large quantity of starch.

The Vera Cruz, Lima, and Jamaica, are nearly alike, having a wrinkled surface, a thin bark easily separated, scarcely any pith, and no farinaceous matter surrounding the wood, as in the Lisbon. The Jamaica, however, has a reddish cuticle, and is frequently covered with minute fibres, whence its names "red," and "bearded;" whilst the Vera Cruz and Lima are more slender, and scantily furnished with these appendages. The latter are also frequently imported with the chump.

All the sarsaparilla imported from Jamaica is brought originally from that part of the coast of Honduras which is called the Musquito-shore.

The Honduras has a wrinkled surface, but, like the Lisbon, is furnished with

thick bark and pith, which abound
ith starch.

The East Indian is imported in shorter
eces, of variable thickness, which are
uch twisted, and have a cracked rug-
ed exterior, so as to resemble slightly
e roots of ipecacuanha. The bark is
a brown colour, thick, hard, and brit-
e; and when bruised in a mortar
adily breaks off, leaving a tough
ody centre, without any pith. It is
e produce of India, and appears to be
tally different from the root of the
eriploca Indica, or "*Country Sarsapa-
lla*," described in Dr. Ainslie's Materia
dica, vol. i. p. 381.

The following tables are intended to
hibit a comparison—

1. Of the quantities of *extract* ob-
ined from those kinds of sarsaparilla
hich bear the names of Jamaica, Lima,
d Lisbon, and also from those which
ve been lately received from the East
dies and Africa;

2. Of the quantities of the several *in-
structible principles* contained in these
ots;

3. Of the quantities of the same prin-
ples contained in the *entire roots*, and
their component parts, the *wood* and
e *bark*.

The quantity analyzed in each case
as two ounces, carefully cleansed from
l extraneous substances.

In conducting the analysis the fol-
wing process was adopted. The mat-
r to be analyzed was macerated first
cold and afterwards in warm water.
he two infusions were always acid, and
ntained no starch. It was then boiled,
d the residuum dried. The decoction
as not acid, but contained starch. The
fusions and decoction were separately
aporated to dry extracts, which, as
ell as the residuum, were incinerated
st in a wedgewood dish over a
mp, and afterwards in a wedgewood
ucible. The ashes of each were boiled
distilled water, and the solutions
sted with nitrate of silver for muriatic
id, and with nitrate of barytes for sul-
uric acid. The solutions were then
ncentrated, and potash was generally
parated by tartaric acid. Other tests
re used without producing any
ange. The undissolved portions of
nes were next dissolved in dilute nitric
id, and the solutions tested by ferro-
anate of potash for iron, by ammonia
alumina, and by carbonate of soda
lime.

No. 1.—Analysis *of* Two Ounces *of the* Roots, Bark, *and* Wood *of* Lima Sarsaparilla.

Weight of Dry Extract and Residuum	Roots, 2 oz. = 960 grs.					Bark, do.					Wood, do.				
	Extract from Cold Infusion.	Do. from Warm Infusion.	Do. from Decoction.	Residuum.	*Total.*	Extract from Cold Infusion.	Do. from Warm Infusion.	Do. from Decoction.	Residuum.	*Total.*	Extract from Cold Infusion.	Do. from Warm Infusion and Decoction.	Residuum.	*Total.*
Ashes	87	45	16	687·5	835·5	126	44	38	564	772	122	34	756	912
	12·5	5·5	2·5	29	49·5	58	10	8	30	106	46	10	10	66
Muriatic Acid	1·8	·7	·1	trace	2·6	7·5	1·2	·6	1·2	10·5	6·8	·6	trace	7·4
	2	1·2	·5	1·2	4·9	14·8	2·6	1·6	trace	19	8·4	·8	trace	9·2
Sulphuric do.	4·1	1·6	1	3·6	9·8	·7	·8	6·6	4	15·3	3·3	6·7	2·7	12·7
	2·5	1·5	trace	12·5	17·5	2	trace	trace	12	18·8	4	2	4	10
Oxide of Iron	·4	·3		3·4	4·1	0			5·2	5·2	0	1·4	trace	1·4
Alumina														
Lime														

No. 2.—Analysis *of* Two Ounces *of the* Wood, *the* Bark, *and the* Roots *of* Jamaica Sarsaparilla.

	Roots.			Bark.			Wood.		
	Extract.	Resid.	*Total.*	Extract.	Resid.	*Total.*	Extract.	Resid.	*Total*
Weight	232	540	772	282	553	835	100	725	825
Do. of Ashes.....	26·2	20	46·2	43·5	50	93·5	20	13	33
— Muriatic Acid.	3·5	trace	3·5	5·3	·8	6·1	·7	trace	·7
— Sulphuric do..	2·7	1·2	3·9	4·4	2	6·4	1·7	2·7	4·4
— Oxide of Iron.	5·3	2·6	7·9	8	6	14	1·3	1·3	2·6
— Alumina	4	5·5	9·5	8	7	15	1	3	4
— Lime	3·3	3·1	6·4	3·3	3·8	7·1	5·6	2·8	8·4

No. 3.—Analysis *of* 2 Oz. *of* Roots *of* East Indian Sarsaparilla.

	Extract from Cold Inf.	Do. from Decoction.	Residuum.	*Total.*
Weight	150	73	673	896
Do. of Ashes	24	13	26	63
— Sulphuric Acid	6·4	1·5	·4	8·3
— Muriatic do.	6·4	2	4	12·4
— Oxide of Iron.....	trace	8·6	2·8	11·4
— Alumina.....	4·3	4·3	4·3	12·9
— Lime	trace	trace	4	4

No. 4.—Analysis *of* Two Ounces *of* Roots *of* Lisbon Sarsaparilla.

	Extract from Cold Infusion.	Do. from Warm Infusion.	Do. from Decoction.	Residuum.	*Total.*
Weight	90	24	102	616	832
Do. of Ashes	11	5·2	14·5	5	35·7
— Muriatic Acid.....	·8	·9	4	·6	6·3
— Sulphuric do.....	2·8	1·3	1·2	trace	5·3
— Oxide of Iron.....	2·3	1·3	2	1·6	7·2
— Alumina	4·5	1·5	2·5	2·5	11
— Lime	1·5	·5	1·4	·5	3·9

No. 5.—Analysis *of* Two Ounces *of the* Fibre *and* Chump *of* African Sarsaparilla.

	Fibre.				Chump.			
	Extract from Infusion.	Do. from Decoction.	Residuum.	*Total.*	Extract from Infusion.	Do. from Decoction.	Residuum.	*Total.*
Weight of Extract and Residuum	26	25·3	580	631·3	77	22	694	793
—— Ashes	5·5	7·5	30	43	8·7	7	26	41·7
—— Sulphuric Acid.....	·6	·5	·6	1·7	1	·6	·7	2·3
—— Muriatic do.	2	·8	·4	3·2	·9	·4	1	2·3
—— Oxide of Iron	·2	1·2	2·7	4·1	1	1	4	6
—— Alumina.....	·7	1·5	4·3	6·5	2·5	·7	1·7	2·4
—— Lime	trace	·7	4·7	5·4	0	1·4	1	2·4

No. 6.—Quantity *of* Extract *and* Indestructible Principles *in* Two Ounces *of* Roots.

	East Indian.	Lima.	Jamaica.	Lisbon.	African.
Weight of Extract	223	148	232	216	51
—— Ashes	63	49	46	36	42
—— Muriatic Acid.....	12·4	2·6	3·5	6·3	3·2
—— Sulphuric do.	8·3	4·9	3·9	5·3	1·7
—— Oxide of Iron	11·4	9·8	7·9	7·2	4·1
—— Alumina	12·9	17·5	9·5	11	6·5
—— Lime.....	4	4·1	6·4	3·9	5·4

It appears from these tables,—

1. That with regard to the quantities of extract, and of their indestructible principles, the five kinds may be thus arranged :—

Indestructible Principles.	Extract.
East Indian.	*Jamaica.
Lima.	East Indian.
Jamaica.	Lisbon.
Lisbon.	Lima.
African.	African.

* Jamaica sarsaparilla was formerly very superior to that with which the market is now supplied. In the year 1822, 1 lb. of Jamaica sarsaparilla yielded 6 oz. of pharmaceutical extract : at present, it rarely yields more than 4 oz.

2. (Tab. 1, 2.) That the bark yields most extract, and contains the greatest quantity of each of these principles, except (in the Jamaica) the lime.

3. That water takes up from the roots the greater part, or nearly the whole, of the sulphates and muriates, a large proportion of the oxide of iron, and a small proportion (varying, however, in the different roots) of the alumina and lime.

I have already observed that potash was generally detected in the watery solution of the ashes.

7 oz. of the roots of Jamaica sarsaparilla were macerated in cold water. To the infusion, a concentrated solution of tartaric acid was added, so long as it caused any disturbance. The precipitated matter settled in two distinct

strata, but the supernatant fluid remained turbid. This fluid and the superior stratum were placed upon a filter, and the filtered liquid slowly evaporated. There remained a crop of crystals, which, after frequent washing with rectified spirit, weighed 41 grs. These were found to be *bitartrate of potash.*

The rectified spirit, with which the crystals were washed, took up a small quantity of *resin*, and thence acquired a brown colour.

Powdered sarsaparilla, however, is very sparingly soluble, either in cold or boiling alcohol, and imparts to it scarcely any colour.

Cold ether, sp. gr. ·733, formed a pale yellow solution, which, being allowed to evaporate on the surface of water, deposited a little *wax* on the sides of the vessel.

2 oz. of the roots of Lisbon sarsaparilla were macerated in water at 110°, and afterwards at 160°. The latter infusion contained a small quantity of *starch.* The roots were then thoroughly boiled; and the decoction, which was scarcely coloured, was evaported to a dry substance, which weighed 200 grs. and consisted almost entirely of *starch.*

Sarsaparilla is commonly termed inodorous, and the term is applicable to the dry root*; but during maceration in hot water, and especially during decoction, an abundant *aroma* is given off. If the cold infusion be distilled, the distilled water† becomes strongly impregnated with this powerful and very diffusible odour. I have within the last few days obtained *essential oil* both from the Bombay and the Jamaica sarsaparilla; and I am now satisfied that the aroma of the distilled water is owing to a portion of the essential oil being diffused in it, as I have seen it floating on the surface, and adhering to the sides of the vessel. I have not yet obtained any essential oil from the other kinds, but I infer its presence from their imparting to water the same odour, though in a less degree.

It appears, then, that sarsaparilla contains

Sulphuric Acid,	Lime,
Muriatic do.	Starch,
Potash,	Resin,
Iron,	Wax, and an
Alumina,	Essential Oil.

To these may be added gum, gluten, colouring matter, and a little silica.

In order to ascertain whether decoction possesses any advantage over maceration in water at a temperature not exceeding 110°, in extracting the principles of this plant,—

2 oz. of Jamaica sarsaparilla were macerated in water at 110°. The maceration was repeated at the same temperature; and the infusions were mixed, and evaporated to a dry extract, which weighed 110 grs.

The dry extract obtained from the same quantity by decoction, weighed 128 grs. The 18 grs. which constituted the difference, contained very little besides starch.

On referring to the tables, it will be seen that No. 1. (Roots) agrees with this experiment; while in No. 3, decoction takes up 73 grs.; and in No. 4, 102 grs. after maceration. These apparent discrepancies are, however, readily explained by the very large quantity of starch contained in the East Indian and Lisbon. The same explanation applies to Table 5.

If sufficient time be allowed, cold water (*i. e.* at the ordinary temperature of the laboratory) will take up nearly the whole of the soluble principles without dispersing the aroma; whilst boiling water not only occasions the loss of this volatile principle, but with a very trifling addition of useful matter, takes up the starch, which renders the medicine incapable of preservation.

For these reasons, I invariably prepare the infusion at a low temperature.

There is another important point which shows the advantage of using a low temperature.

If, in any of the above tables, the combined weights of the dry extract and the residuum be compared with the weight of the quantity operated on, it will be found that a considerable loss has taken place. The nature of this loss was investigated in the following experiments:—

1 lb. of each of the five above-mentioned kinds of sarsaparilla was digested in a

* The Bombay root, however, has a faint odour, not unlike that of Prussic acid, which becomes very powerful when the infusion is heated.

† Without venturing to speak positively of the medicinal properties of the distilled water, I may observe, that it is at present under trial in the Hospital Ship Dreadnought; and that from the report which Mr. Lawson has kindly furnished, it appears to be powerfully diaphoretic and diuretic, and to exert a beneficial action in secondary syphilis.

well-adapted still, carefully luted, and the distilled water collected through a closed tube. This fluid was more or less impregnated with the odour of the sarsaparilla. The fluid remaining in the still was removed, and slowly evaporated to a dry extract, at temperature of 120°, and the residuum dried. The quantity of volatile matter absorbed by the distilled water, calculated from its specific gravity, varied from about 30 grs. in the Bombay, African, and Lima, to 45 in the Lisbon, and 90 in the Jamaica; and this being added to the quantity of dry extract and residuum, the losses were as follow:—

	oz.	dr.	gr.
Lima	2	2	34
Jamaica	2	7	8
Lisbon.....	2	7	33
Bombay	5	4	44
African	5	4	49

It is evident that in these experiments the entire loss must have occurred in the process of evaporation. The greater part of the loss, indeed, takes place in the concluding part of the process, viz. in reducing the substance from the condition of a pharmaceutical extract to the state of dryness; but the experiments clearly shew that the principle of maintaining a low temperature, which I have recommended in forming the infusion, should be equally attended to in conducting the evaporation, in order that the loss may be as little as possible.

Upon the whole I am of opinion, that the best form in which this medicine can be exhibited is the powdered bark. In cases where the stomach will not bear this mode of exhibition, the cold infusion of the bark will be found little, if at all, inferior; and if a more elegant or convenient form be preferred, I would recommend the *Liquor;* that is, the concentrated cold infusion.

The mode of preparing the *Liquor* is very simple: the cold infusion, having been slowly evaporated to the consistence of a syrup, is allowed to stand for two or three days; at the end of this time some gummy matter will be found to have subsided. When this matter, which would rapidly undergo decomposition, has been separated, the concentrated infusion is not liable to undergo any further change.

I hope to be able to furnish shortly analyses of Bark, Senna, Jalap, and Rhubarb.

Ophthalmic Laboratory, Moorfields,
December 30, 1833.

ANEURISM—LIGATURE OF THE EXTERNAL ILIAC.

To the Editor of the Medical Gazette.

Sir,

If you think the following case worthy a place in your valuable journal, you will much oblige me by inserting it.

I am, sir,
Yours respectfully,
E. Grundy, M.R.C.S.

Bury, Lancashire,
Dec. 16th, 1833.

March 12th, 1832.—I was requested to visit James Holt, æt. nine years, to examine a tumor situated on the left thigh, when his parents gave me the following history of his complaint:—About eighteen months ago, in a quarrel with another youth, he received a kick on the inside of the left thigh, which caused a considerable degree of tumefaction; this, in a short time, under the use of domestic remedies, apparently disappeared, and nothing more was thought of the matter until some time after, when it was discovered the swelling had again made its appearance, but was much smaller than before, and the skin not at all discoloured. Up to the present period, the tumor has gradually increased in size; various applications have been continually resorted to, with a view of dispersing it, but without effect, as the enlargement has progressively increased. I found the tumor occupying the upper and inner part of the thigh, embracing the course of the femoral artery, of an oblong shape, about six inches in length, and extending as high as Poupart's ligament; the circumference of the limb in this situation four inches greater than on the opposite side, firm and elastic to the feel, possessing a slight pulsation, with a thrilling sensation throughout, the integuments covering it of a natural appearance; pressure diminishes in some measure its bulk; the leg is weaker than the other, which causes a peculiarity in his gait. He complains of numbness and coldness of the extremity. There has been no constitutional disturbance since the receipt of the injury, for the lad has enjoyed uninterrupted good health. Considering the case to be rather obscure, I applied the stethoscope over the course of each femoral artery, and compared

the sounds elicited with the following result. On the unaffected side the sound was clear and distinct, the impulse moderate; on the diseased side the sound was much louder, the impulse greater, and accompanied by the bellows-sound. Several of my professional friends examined the case, who all agreed in the propriety of tying the external iliac, as the most likely means of arresting the progress of the disease. I proposed the operation, to which his parents at first objected, but eventually agreed to, as he began to suffer more pain, and the swelling was evidently gaining ground.

April 2d.—I performed the operation, assisted by my friends, according to the plan recommended by Sir A. Cooper; during which considerable difficulty was experienced, in consequence of the lad screaming and struggling so violently as to throw the abdominal muscles into a state of spasmodic action. However, after a time he became calm, and the vessel was easily secured. After the operation he complained of more numbness and coldness in the limb than before, which gradually wore away; the limb maintained its natural temperature, and soon recovered its wonted energy.

6th.—On dressing the wound, I found it healed by the first intention, except at the points the ligature occupied.

17th.—The ligature came away; after which the wound speedily cicatrized. He had not a single unfavourable symptom after the operation; the tumor was gradually absorbed, and the limb has recovered its original size.

Reflecting on the history and termination of this case, the symptoms may perhaps be accounted for as they succeeded each other. The violence done to the lad probably ruptured the internal and middle coats of the artery, at the same time causing an extravasation of blood in the surrounding parts, which was subsequently removed by absorption; the vessel, being weakened at the injured part, was unable to withstand the impetus of the heart's action, and consequently dilated and formed an aneurismal sac, which, increasing, obstructed the circulation, so that a clot was formed; layer after layer of coagulable lymph was deposited on the sides of the sac, and rendered the pulsation more obscure. The difference in sound given by the stethoscope from the two arteries proves a diseased state of the vessel. The result of the operation proves the accuracy of the diagnosis, and furnishes another example of the soundness of the physiological principles first promulgated by John Hunter.

GENUINE AND FRESH SUPPLY OF VACCINE OBTAINED.

To the Editor of the Medical Gazette.

Sir,

So much has been said and written, in this country and upon the Continent, on the question of vaccine insecurity, and the necessity of having recourse to the cow for a fresh supply, by way of remedying the supposed time-worn degeneracy of the virus, that it will be satisfactory to your readers to know, that what has only been talked of here has been actually effected in India—that a fresh virus has been obtained, and that, when the last accounts came away, both the old and the new stocks might be found at Calcutta.

The circumstances which led to this event, and its more immediate consequences, are detailed in a very interesting memoir by G. G. Macpherson, Esq., Surgeon in the Bengal Service, published in the sixth volume of the Calcutta Medical and Physical Transactions, recently received in this country. A short abstract of that paper may, perhaps, usefully occupy a few columns of your widely-circulated journal.

On the 4th June, 1832, the Medical Board of Calcutta transmitted to the superintendants of vaccination in the provinces a circular, calling their attention to the "numerous instances of varioloid disease, of a dangerous and even fatal character, which have of late occurred in persons who were previously supposed to be protected by vaccination, and which have so shaken public confidence in the powers of vaccination, that it becomes their duty to take steps to prevent the neglect of this invaluable prophylactic." For this purpose they call upon their vaccinators to institute a series of investigations and experiments, for the purpose of regenerating the virus, and of restoring it to its pristine activity, if it really have degenerated. The best means of effecting this, the Board apprehend, will be to obtain *a fresh supply of virus from the cow.*

Conformably with the instructions of the Board, Mr. Macpherson, superintendant of vaccination at Moorshedabad, set to work; and began by making several attempts to affect cows by covering them with the blankets of patients labouring under small-pox, and by inoculating them with small-pox matter and with vaccine matter. They all proved unsuccessful; when he learned that an epizootic had shewn itself among the cows at Moidapore, which the natives called by the same name as that given to variola in the human subject. The following is the account given by Mr. Macpherson of this *lues bovilla*.

The animals, for a day or two, appear dull and stupid. They are then seized with distressing cough, and much phlegm collects in the mouth and fauces. There is no appetite for food, or at least an inability to eat. The suffering seemed to be greatest on the fifth and sixth days, when there was considerable fever, and pustules made their appearance all over the body, especially on the abdomen. These went on to ulceration; the hair falling off wherever a pustule ran its course. The mouth and fauces appeared to be the principal seat of the disease, being, in some instances, one mass of ulceration, which, in all probability, extended to the stomach and alimentary canal. The mortality among the cattle in this epizootic, was calculated at from 15 to 20 per cent. The immediate cause of death seemed to be the affection of the mouth, and consequent inanition.

Mr. Macpherson remarks upon this, how much more serious a complexion the cow-pox assumes in India than what we are taught to believe it does at home. The author does not, however, appear to be aware that instances of a similar kind have been described by writers in this country; as, for instance, in Dr. Barron's Life of Jenner, p. 352. He observes, as a fact worthy of especial notice, that while the cows were thus affected, no case of variola occurred among the natives of the village. It happened that two cows, belonging to one of his own vacciuators, became affected with the prevailing disease. He had them covered with blankets, leaving merely the udder and teats exposed to the air. On the seventh day, two small pustules made their appearance on the teats of one, which dried up on the tenth, and the crusts were removed on the twelfth day.

These *crusts* were employed for the purpose of regenerating the vaccine virus. Eleven native children were inoculated from them. On ten of them no satisfactory appearances presented themselves, but the arm of the eleventh child assumed, to his great gratification, *all the characteristics of true vaccine*. A vesicle appeared on the fifth day, which continued to increase till the ninth. The constitutional irritation ran high for four days. The child soon recovered.

Two children were vaccinated with the new lymph, and with the most complete success; but the symptomatic fever was *more severe* than he had ever observed in former instances. From these two, five others were vaccinated; and the result was equally successful. Many of the children belonging to his Majesty's 49th regiment, and others in the families of the English residents, were next vaccinated with the regenerated virus. Dr. French, Mr. Skipton, and other medical gentlemen, expressed themselves completely satisfied with the result. "It is a gratifying fact," adds Mr. Macpherson, "that since the introduction of the new lymph, the symptomatic fever has been more marked, and the confidence of the natives in the efficacy of the operation has increased; the numbers presented for vaccination within the last three months, having much exceeded that of any similar period for the previous two years."

To make sure that the *new* lymph was really the *true* lymph, he inoculated two of the aforesaid children with small-pox, and both proved secure. Five others were accidentally exposed to the infection of small-pox, but did not take it. The authenticity of the new lymph, therefore, appears to be established.

Mr. Macpherson's paper concludes by announcing that crusts and ivory points, charged with the new lymph, were on their way to Calcutta. No notice of the trials at Calcutta with the new lymph are given. The paper bears date, Moorshedabad, 29th November, 1832.

It would be interesting to know the source of that lymph which, previous to these experiments, had been employed in India. That which was originally supplied to Calcutta, in November, 1802, came from Vienna, by way of Constantinople, Bagdad, Bunorah, Bombay, and Madras *; and was sent by Dr. De

* See Barron's "Life of Jenner," p. 422.

Carro, who describes it as "the second generation of Milanese equine, or greasy matter, transplanted at Vienna *." Whether this stock has been kept up, or has given place to lymph from England or from any other source, I have no means of ascertaining.—I am, sir,

Your very obedient servant,

GEORGE GREGORY.

31, Weymouth-Street,
Dec. 21, 1833.

CASE OF FEMORAL HERNIA.

To the Editor of the Medical Gazette.

SIR,

CONSIDERING the following case one of very considerable interest, I beg leave, through the medium of your journal, to communicate it to the profession.

I have the honour to be, sir,
Your very obedient servant,
BRANSBY B. COOPER.

New-street, Dec. 21, 1833.

Rachael Rapley, æt. 72, on Friday, the 13th instant, was admitted into Guy's Hospital, under my care, being the subject of a femoral hernia, which she described to have descended on the Friday previous, and not since that period to have returned into the abdomen. She said, that when the rupture came down, she experienced a slight sensation of sickness, attended with pain across the abdomen: her bowels have remained insuperably constipated, but she has been free from vomiting, hiccough, and the usual urgent symptoms concomitant with strangulated hernia.

Upon examination, I found a femoral hernia on the right side, about the size of a pullet's egg. The tumor was not very tense, nor did the patient complain of the usual degree of pain upon its being handled: it communicated to the feel a sensation somewhat approaching to crepitation, but free from fluctuation. There had not been any sudden increase in its size, or any momentary cessation of pain, to indicate a gangrenous state of the contents of the sac. I did not, however, think it safe, considering the length of time that had elapsed since the protrusion had occurred, to attempt the reduction of the hernia.

The abdomen was distended, but not tympanitic; the colon could be traced throughout the course of its arch, as if filled with fæces; constipation still insuperable; the patient free from sickness or hiccough; the pulse very small; and the surface of the body cold, which, however, I attributed in a great measure to her exposure to the inclemency of the weather, in bringing her to the hospital.

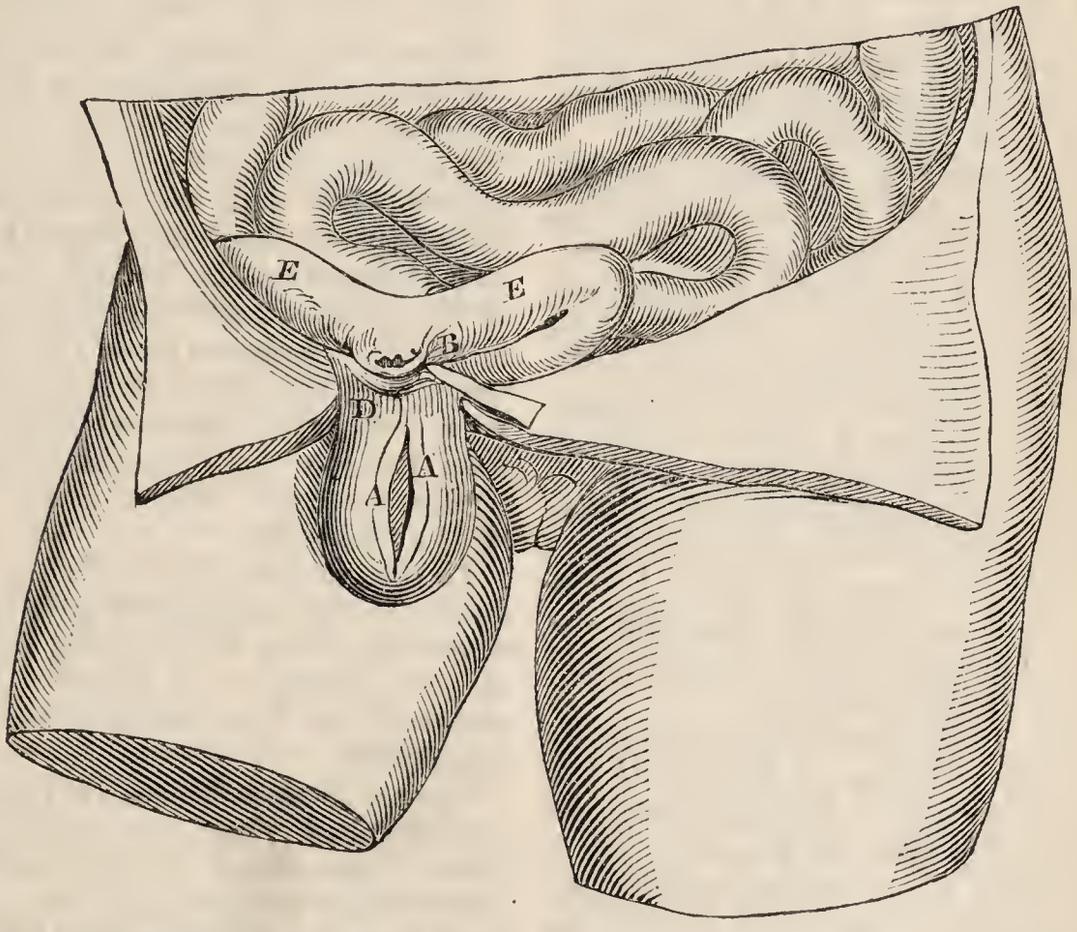
I immediately communicated to the pupils around me my opinion of the case:—that under the facts of the absence of sickness, and hiccough, and tympanitic state of the abdomen, attended with the evident lodgment of a large quantity of fæces in the colon; considering also her age, and her present depressed state, that it would be better before I operated to empty the large bowels by means of clysters, and to attempt the restoration of her natural heat by the application of warmth to the surface of her body: drawing their attention, at the same time, to the probability of the contents of the humeral sac not being intestine, as the absence of sickness would indicate, and therefore that under these circumstances I did not consider myself warranted to operate immediately. A colocynth clyster was exhibited, by passing the tube as high up as it could be introduced, but which met with considerable resistance from the accumulation of fæces in the rectum, some portion of which being removed, a second clyster was administered and thrown into the colon; this soon produced a very copious evacuation, and at half-past three, my second visit to the patient, I was shewn plentiful feculent stools, which from their colour and general healthy appearance, convinced me they had passed through the small intestines, and were not merely the retained contents of the intestinal canal below an impervious intestine; the patient's pulse had become fuller and stronger, and she seemed considerably relieved. Under these circumstances I determined not to operate, and explained to the pupils in the operating theatre (where they had already assembled), my reasons for further delay, deprecating, at the same time, the danger of procrastination under common circumstances of strangulated hernia, and appointed eight o'clock again to visit the patient. Upon my arrival at half-past seven, I

* See Monro on "The Prevalence of Small-pox," in Edinburgh Journal of Medical Science. vol. i.

found her bowels had been again relieved, but her countenance was now sunken, the surface of her body cold, the pulse scarcely to be felt, and she was evidently in a dying state; she lingered, however, till about ten o'clock, when she died.

The post-mortem examination was conducted by Mr. King, in the presence of Mr. Key, upon which the following appearances presented themselves.

The hernial sac was found in a state of gangrene, and to contain only a dark grumous fluid; the stricture at the neck of the sac was so complete as with difficulty to admit the passing a director under it; nor was this stricture in any way relieved by the division of *Poupart's and Gimbernat's ligaments*. Upon opening the abdomen, a portion of the ileum was found immediately above the mouth of the hernial sac, within the abdomen, presenting a nipple-like process, which had evidently been the strangulated portion, but so small as not to involve more than one-fifth of the calibre of the bowel, consequently leaving the intestine pervious, and probably accounting for the absence of the vomiting, as well as the free evacuation of the bowels, subsequent to her admission into the hospital, which formed the prominent features in the case. The nipple-formed portion of the intestine was in a state of sphacelus, and there was a small opening in its apex, which admitted the passage of the contents of the intestine into the peritoneal cavity, in which were found a number of small currants. The remainder of the small intestines above the strangulated part were highly inflamed, and in many points adherent, from the effusion of lymph; the whole length of the intestinal canal was found empty.



AA, hernial sac laid open, and shewing its thickness.—B, nipple-formed, strangulated portion of the ileum—Poupart's ligament turned back.—D, situation of stricture.—EE, ileum highly inflamed.

ON THE DOCTRINE OF CRITICAL DAYS IN FEVER.

To the Editor of the Medical Gazette.

Sir,

On reading, a short time ago, in Johnson's Medico-Chirurgical Journal, some observations of the reviewer on "Dr. Latham's Clinical Remarks on the Duration of Fever," I met with the following paragraph:—

"All the good old notions in medicine are fast disappearing before the modern rage for precise induction and morbid anatomy. The doctrine of criti-

cal days in fever has been for many years consigned to the tomb. But the belief in specific periods of duration has survived, and old practitioners of the present time yet talk of fevers of twenty-one and of fourteen days, as if their existence were beyond possibility of doubt." The reviewer further adds, "some tables, constructed by the active observation of Dr. Latham, will serve to shew how futile is the popular creed in this particular instance *."

I am not one of those who look with complacency on the universal spread of that modern rage which roots up and sweeps before it ALL the good old notions of former times; nor do I apprehend mankind would gain much, were the foundation of medical science to be laid entirely anew, based solely on the pretended discoveries of the present day. Although the doctrine of critical days has been thus, with ruthless hand, consigned to the tomb, it is perhaps only for a season; and when this destructive rage has a little subsided, it may, among some other good old notions, undergo a process of resuscitation.

This doctrine is so ancient, and has been so universally received in all ages, and by practitioners of the greatest eminence, that it is difficult to believe it has not some foundation in nature; and although the tables constructed by Dr. Latham are brought forward to support a contrary opinion, I cannot assent to the validity of his conclusions until my mind shall have been satisfied as to some few points which have not been adverted to by Dr. Latham, and which I shall briefly state. It may be urged that the subject, upon the whole, is not one of much practical importance, and is little regarded in the present day in the treatment of the disease. It may be so; but the investigation of truth can never be altogether useless, and the feeblest enemy can hardly be expected, when attacked, to succumb without some effort at defence.

Fever is essentially the same disease, under all its forms and varieties: it consists of repeated paroxysms of accession and remission, or intermission; of cold stage, hot stage, and crisis. An intermittent is the most perfect form of fever, having the most complete periods of accession and intermission. The continued fever, as it is called, differs from this only in its periods being less perfect, and the stages of its curriculum less obvious: that is, continued fever consists of as separate paroxysms as intermittents; the difference being, that, in continued fevers, the next exacerbation takes place before the three stages of the former one have been perfectly completed.

Much ambiguity has arisen in reckoning the duration of fever, from not attending to the distinction between the natural or civil day and the proper medical day, which always commences about five or six o'clock in the evening; so that at whatever time of the civil day a fever may attack a person, its future exacerbations are always to be reckoned from the latter period, the commencement of the medical day. Thus, if a person is attacked with fever at noon on Tuesday, the second day of the disease will not be Wednesday, but Thursday; because the first repetition, or second period, will take place on Wednesday evening: the first day of the fever is to be reckoned from Tuesday evening.

Patients not unfrequently complain of some indisposition for a day or two before the first paroxysm of fever is fully formed; this adds to the difficulty of reckoning the duration of fever, for those who estimate the first uneasy sensations of the patient as the commencement of fever. "It happens (says Dr. Fordyce) sometimes, that these symptoms go off in a few days; sometimes they all at once increase very considerably, and form a paroxysm, which is the beginning of the fever.

In the tabular view, the date of termination is as ambiguous as the date of commencement; it remaining uncertain to the cessation of what particular symptoms the termination of the disease is ascribed.

We are next to observe, that although, in continued fever, an exacerbation takes place every evening, yet every exacerbation is not equally violent, the fever early displaying something of an intermittent type; at first every second exacerbation being more violent, afterwards every third paroxysm; and in proportion to the violence of the exacerbation, is the probability of the termination of the fever by crisis: employing that word in the sense in which it is used by the Greek physicians; not confining it to express a salutary termination only, but comprehending a fatal termination as well. On this account,

* October 1833, p. 544.

therefore, the tabular view is imperfect; not giving an account of the deaths as well as the recoveries.

In the earlier periods of fever, whilst every second paroxysm is more violent, we may expect the crisis to happen on the seventh, ninth, or eleventh day; when every third period is more violent, we expect it to happen on the fourteenth, seventeenth, or twentieth day. Thus, in all continued fevers, there is a tendency to observe an intermittent type: at first a quotidian, next a tertian, and lastly a quartan. Fever, then, has a double circle, or period of revolution—a shorter one and a longer one—similar to the diurnal and annual revolutions of the planetary system.

The accession of these different types is not always uniform—the fever sometimes displaying the tertian type earlier than at others; and this circumstance will have great influence in determining the particular critical days. In a short paper on epilepsy, contributed by me to the Medical Repository some time ago, I asserted, that in persons who had formerly suffered under intermittents, or agues, continued fever would sooner assume the tertian type than in other persons. I am still of the same opinion.

Admitting the doctrine of critical days in fever to be well established, there are several circumstances which may operate in preventing an evident manifestation of them. No more is contended for, than that there exists in the system a natural and uniform tendency to such a termination—a periodical certamen or struggle between the powers of nature and the disease, in some one of which the patient is carried off, or placed out of danger. We sometimes observe, in cases of recovery, that a crisis, begun in part on one critical day, is perfected on the subsequent critical day.

One circumstance which chiefly prevents the manifestation of critical days, is the interference of art; by which the progress of the fever is interrupted and materially deranged. In fevers left to themselves, the tendency to critical termination is much more obvious. It is also said to be more observable in warm climates than in cold ones; but we have abundant testimony of fevers possessing this property in our own country. Even when fever has manifested critical symptoms, the least error in management (as giving food improperly) will reproduce fever—in fact, a new disease. If this is reckoned as a continuance of the original fever, it will add to the difficulty of settling the question. It is to be taken as a general rule, that when fever is protracted beyond a certain time the influence of critical days is much less than in the earlier periods, because probably some local disease is superadded, which takes the fever out of its natural and regular course.

One objection strongly urged by the reviewer, against the doctrine of critical days, is, that "the examination of the bodies of the dead has shewn that ulcerations of the mucous membrane of the bowels, and organic ulcerations in the chest and in the head, are observed in a greater or less degree in the majority of cases." This is unsound reasoning, unless it be proved that such disorganizations were the immediate or proximate cause of the fever. They are obviously the effect. Were the symptoms produced by, and dependent upon, these disorganizations (which may be the case towards the end of the fever, and previously to the death of the patient), it would be a case of symptomatic fever, not the pure idiopathic fever, to which alone do critical days belong; and therefore all reasoning upon this point is beside the question.

We mistake the true nature of fever if we assign local lesion as its proximate cause, for then we should expect the severity of the symptoms to be proportioned to the intensity of the cause; but how stands the fact? Compare the commencement of ague with that of ordinary continued fever, arising, it is said, from "extensive ulceration of the aggregated glands of the ileum:" the paroxysm of the former is beyond measure more severe; more rigor, more vascular excitement, more pain in the back, more pain in the limbs, more head-ache, more cerebral disturbance; yet all these symptoms vanish in ten or twelve hours, and the patient appears to be well, until the expiration of forty-eight or seventy-two hours from the first attack, when perhaps all the symptoms are again repeated. What becomes of the local lesion in the meantime? If these paroxysms are not produced by local lesion, then local lesion is not necessarily the proximate cause of fever, fever being essentially the same disease under all its various forms.

The fever which precedes exanthematous eruptions is the same in nature and essence as fever in all its other varieties; frequently, in its earlier stages, it cannot be distinguished from any other, as in small-pox; yet who doubts the progress of the disease in this instance being influenced by critical days? It is matter of common observation, that crises happen, or the disease turns, as it is expressed, on the seventh, ninth, eleventh, and fourteenth day.

If the tabular view of Dr. Latham is relied on by those who deny the existence of critical days, other tabular views may be adduced in support of the affirmative side of the question. De Haen, in collecting facts on this subject, from the writings of Hippocrates, found, that of 163 instances of the termination of fevers happening within the first twenty days, 107, or more than two-thirds, took place on some one of the critical days. The result of Cullen's experience is thus stated: "Our own observations amount to this; that fevers with moderate symptoms, generally cases of synocha, frequently terminate in nine days or sooner, and *very constantly* upon one or other of the critical days which fall within that period; but it is very rare in this climate that cases of either typhus or synochus terminate before the eleventh day; and when they do terminate on this day, it is for the most part fatal. When they are protracted beyond this time, *I have very constantly found* that their terminations were upon the fourteenth, seventeenth, or twentieth day." Who shall decide when doctors disagree?

After all, there is something venerable in antiquity, and of the two conflicting authorities, Hippocrates and Dr. Latham, I am inclined to prefer the former, at the risk of being accused of bad taste in at all referring to the "subtle Greek*."

The present age is distinguished for the march of intellect, and for its numerous discoveries; among the most important, and perhaps the most extraordinary of those in medicine, is the one promulgated by our modern pathologists, to the effect, that all the descriptive histories of fever transmitted to us by practical physicians, for the last 2200 years, from Hippocrates inclusive down to Cullen and Fordyce, are, as to this point, founded in error and misrepresentation—are mere delusions of imagination, devoid of reality and destitute of truth.—I am, sir,

Your obedient servant,
W. Shearman, M. D.

Northampton-Square,
Dec. 23, 1833.

* A term used by the reviewer, who says, "at the time when the subtle Greeks gave laws to the progress and continuance of this affection." This power of the Greeks almost equals that ascribed to the College of Physicians by Dr. Last, who, when reminded that the heart was on the left side, replied, that it used to be so, but the College had altered it.

ON AFFECTION OF THE MUSCLES OF RESPIRATION.

To the Editor of the Medical Gazette.

Sir,

Nervous affections present themselves with such curious and complicated features, that we are apt to seek an excuse for omitting to examine the particular actions which are deranged, by calling them *hysteria*, *chorea*, *partial paralysis*, *convulsions*, &c.

Of this class of diseases Sir Charles Bell has occasionally remitted some cases, in which he has of late been consulted, to me, for the purpose of ascertaining the details, preserving notes of them, or, as in the present instance, making the proper measurements. Upon revising these notes, it has occurred to me that the subjoined case and observations might not be uninteresting to your readers.—I have the honour to be,

Your obedient servant,
Alexander Shaw.

December 28, 1833.

October 28th.—Mr. S. a gentleman, 28 years of age, of an active and athletic form, and apparently in good health, presents himself with an affection of his breathing. He complains that he is not able to expand his chest freely. Upon stripping himself, to shew the form of the chest, it is found that the ribs, especially those at the lower margins, are drawn inward or constricted in a remarkable manner; so that the waist presents the same tightened appearance that might be produced by drawing a bandage firmly around it. In correspondence with this constriction of the thorax, there

is a fulness and rotundity of the abdomen, resembling what is commonly called the "pot-belly" in older persons. This condition of the chest is the same during inspiration and expiration. The circumstance to which the patient principally directs my attention is, that he cannot, by any effort, expand his chest. When he is requested to attempt to draw a deep breath, the ribs remain motionless; the thorax is neither elevated nor dilated to a perceptible degree; his breath is checked before the full action of inspiration is accomplished; and he suffers pain round the margins of the chest when he makes the attempt. There is a rumbling noise at the epigastric region every time that he inspires, which appears to be produced by a part of the stomach or great intestine being protruded from under the indented edge of the cartilages, when the diaphragm contracts, and dilating as soon as it has escaped from the compression. The muscles which act upon the chest were examined with great care. It was discovered that those which are situated externally, and whose office it is to combine in action with the diaphragm during inspiration, were altogether deprived of the power of contracting in consent with this muscle. When the patient was requested, as before, to make a full inspiration, and when the hand was pressed upon the serratus magnus anticus, to discover whether it was contracting, no action in its fibres could be perceived: when, in the next place, the two sterno-cleido-mastoidei were examined, the same want of rigidity in their fibres was observed. The shoulders, it was also remarked, remained perfectly steady, and without the smallest elevation taking place, notwithstanding that the patient all the time endeavoured to imitate the usual action of heaving the chest. The larynx could be observed rising and descending naturally; but it was thought that the nostrils did not expand with that degree of freedom which usually accompanies the effort to draw a deep breath. When the hand was laid on the abdomen, the abdominal muscles could be perceived to be in powerful action during each expiration, and the fibres of the rectus, arising from the front of the chest, started into view; upon pressing, however, more firmly with the hand, the patient started back suddenly, to escape from the compression, saying, that pressure there prevented him from breathing. If he takes a pinch of snuff, and is excited to sneeze, he suffers great pain; from the action of sneezing being, as he expresses himself, "divided into a succession of short, imperfect fits, during which the parts about his waist seem to be tearing separate." If he walk fast, he is soon put out of breath; and if he has to ascend a hill, he requires to stop frequently to take breath. His speech is not much affected, yet he says that he can only read aloud for a short time together, owing to his want of breath: and in singing, his voice is deficient in its natural power. At night, he is disturbed with frightful dreams, and often awakes from a sense of suffocation. He sometimes suffers from sudden pains shooting through his body: he has loss of appetite.

It is observed, with much interest, that though the muscles of the neck and side of the thorax are here incapacitated from acting during respiration, they retain their full power in the common motions of the frame, such as in turning and bending the head, elevating the shoulders, retracting or pulling them forwards, according to the will.

This affection of the chest comes on in distinct attacks, which generally last for a fortnight before any change takes place. This is the fifth time that he has been seized in a similar manner. When he is free from them, his chest is expanded, and quite natural in all its movements. He points to the looseness of his waistcoat, under which he can thrust his two fists, as a proof that he is naturally broad-chested; adding, that his abdomen, instead of being protuberant, as at present, was always on a lower level than the margins of the ribs.

He was first attacked with this complaint while galloping his horse on the beach near Liverpool: he felt a sudden difficulty of breathing, which made him exclaim to those who were riding along with him, that "he had lost his wind." This occurred shortly after he had recovered from a dangerous inflammation of his bowels, in which it was necessary to reduce him to a state of great weakness, by active treatment. The situation of the pain, during his illness, was principally in the left hypochondriac region,

but it extended generally over the abdomen, and he was at one time treated as if it were inflammation of the liver. He had frequent discharges of blood and of coagulated lymph from the bowels. He relates that on one occasion, during his convalescence, when his physician pressed with his finger on a small spot a little way below the left nipple, he felt a sudden pain or shock, and dropped immediately to the ground in a faint.

He himself attributes all the attacks which he has had to the effects of his living in the neighbourhood of the sea. Each time that he has been seized with this affection, he has been residing at the sea-side; and he has always recovered upon removing to an inland town. He is just now arrived from Liverpool, to which place he had gone in perfect health, not more than a week ago.

He was ordered coloeynth and blue pill, three times in the week: after a few days' delay, he was to take a tonic mixture, with the mineral acids: he was recommended to sponge his chest with a tepid solution of sal ammoniac, and to use active friction after it, three times a day. Subsequently he was put upon a course of ioduret of iron, twice in the day; and had a broad plaister of belladonna applied to the chest, with a liniment for the side of the neck.

Nov. 6th.—Mr. S. has come to day to announce that he is almost well; and that his chest is nearly of its natural dimensions. As in the former attacks, the power of dilating the chest has been restored gradually: he expects soon to be completely recovered. He has pain and a feeling of laceration in the muscles about the neck and arms, when he attempts to take a full breath.

18th.—This gentleman pronounces himself now to be quite well. The thorax can be fully expanded, and it is free in all its movements, as in perfect health: the abdomen, also, instead of being protruded as before, is on a lower level than the ribs. An accurate measurement of the circumference of the chest having been taken at the patient's first visit, a comparison could now be made with its proper dimensions. The following table, containing both the measurements, will shew that the difference in the width of the most moveable part of the chest at the two periods, amounted to five inches; and where the ribs are more unyielding, to two inches:—

	Circumference of the Chest at the Ensif. Cartilage.	At the Nipple.
Oct. 28	$28\frac{1}{4}$ inches.	$32\frac{1}{2}$ inches.
Nov. 18	$33\frac{1}{4}$ do.	$34\frac{1}{2}$ do.
Difference	5 inches.	2 inches.

Remarks.—The details of this case suggest several interesting subjects for our speculation; but that I may not encroach too much upon the limits of your journal, I propose to confine my remarks upon it to those of a physiological nature only. It will be seen, if we examine the deranged actions of the muscles in this patient, with a reference to the functions of the nerves, that they confirm the views entertained by Sir Charles Bell on the different properties of certain nerves of the neck and side of the thorax. As the investigation of these nerves is one of the most difficult in the whole inquiry into the nervous system, it is to be expected that there will be an obscurity in regard to some of the circumstances in this case. If the facts, however, tend to corroborate the truth of an important principle, which is used as an instrument to guide us in the prosecution of the nervous system, it is our duty to record these faithfully, since the establishment of a correct principle, general in its application, is obviously of the highest consequence.

The most remarkable thing to be explained in this case, is the constriction of the chest, by which the circumference was diminished to the extent of five inches, compared with its natural condition; and the narrowness that this produced caused the abdomen to bulge out in an extraordinary manner. It was observed also that the ribs were quite motionless, even when the patient attempted to draw a deep breath; and that there was no contraction in the muscles of the neck and shoulder, or of the side of the chest, such as naturally takes place during inspiration.

From these facts it appears conclusive that the expansion and contraction of the lungs must have been carried on, in this patient, solely by the diaphragm and the abdominal muscles. It follows also, that the diminution of the circum-

ference of the chest, and the symptoms described in the case, must have been produced by the action of these muscles operating upon the ribs, when deprived of the consent of the others which are employed in respiration. And first with regard to the diaphragm. This is the great muscle of inspiration; but to perform its action properly, it is necessary that other muscles, situated external to the chest, should act in combination with it. If we consider how the fibres of this muscle are attached to the inside of the ribs, all round the margins of the chest, and also, through means of its crura, to the lowest lumbar vertebræ, we may understand that, if the ribs be not held out firmly by muscles acting in an opposite direction to it, and if they be therefore permitted to yield, the diaphragm will fall upon them, according to the course of its fibres inserted into them. As the weight of the abdominal viscera presents a resistance to this great circular muscle in descending, these will become, as it were, a fixed point in the centre, from which the fibres diverging to the circumference will act upon the ribs, and draw them inwards, if they be not held fixed by counteracting muscles. That this pulling in of the ribs by the diaphragm may greatly diminish the width of the chest, will appear obvious, if we consider the freedom of motion of the ribs, especially at the margins of the thorax, their pliancy and elasticity, and with what mechanical advantage the fibres of the muscle are inserted into them, at a distance from the spine, their centre of motion. Here, then, we have an explanation of the constriction of the chest in the patient whose case has been related; for it was stated that the muscles situated externally, and whose office it is to oppose this tendency of the diaphragm, had ceased to act in combination with it; there was, accordingly, nothing to prevent the ribs being pulled downwards and inwards, each time that the diaphragm contracted, to the greatest possible extent which their elasticity and freedom of motion might permit.

We have thus had presented to us the curious view of the great muscle of inspiration, operating in such a manner upon the ribs as to diminish the breadth of the chest. It is evident, that in proportion as its action was expended in doing this, it lost so much of its power of propelling the abdominal viscera downwards, to enlarge the chest longitudinally. Hence we perceive the importance of that class of muscles which is provided to elevate and expand the thorax, in sympathy with the diaphragm.

It may here suggest itself, that if the contraction of the diaphragm, operating on the elastic cartilages and ribs, were the sole agent, the constriction of the chest would only last during inspiration; for whenever the diaphragm relaxed, the ribs would be relieved from the force which pulled them inwards, and they would immediately start up and expand by their own elasticity. But it was noticed in the case that the thorax was equally diminished in its circumference during expiration and inspiration. The ribs were therefore braced down, and prevented from rising when the diaphragm relaxed. Now this was evidently the effect of the abdominal muscles contracting with increased force during the act of expiration; as was confirmed by the tension of the abdominal muscles, and the distinct manner in which the rectus abdominis started into view in expiration. In common breathing, the expulsion of air is effected by the easy descent and collapsing of the ribs, after having been previously elevated during inspiration; the elasticity of the thorax is here brought into play, and in consequence of this tendency of the chest to recover its former position, the abdominal muscles do not require to act with much effort. But in this gentleman, so far from the chest being elevated and expanded during inspiration, it was forcibly drawn down and contracted; the elastic force of the ribs, which tended to make the margin fly upwards, was powerfully opposed; consequently, whenever the diaphragm ceased to contract, there was a disposition in the chest to become dilated instead of collapsed. Accordingly, the abdominal muscles, as expiratory muscles, had not only, as in common breathing, to push up the contents of the abdomen, and thus compress the lungs, but they were brought into powerful action to restrain the elasticity of the ribs, and prevent them from starting up and dilating the chest. If they had not taken this office of holding down the ribs when the diaphragm relaxed, let us only observe what would have happened: there would have been

a dilatation of the thorax, from the resilience of the ribs, at each expiration.

The peculiarities of this case will derive additional interest if we compare them with the manner in which a patient breathes who has suffered fracture of the spine at the lowest cervical vertebra. The importance of the office of the external muscles of inspiration, which in this case have been deprived of the power of combining with the diaphragm, will thus be more strikingly illustrated. The effect of an injury to the spinal marrow, at the lower part of the neck, is to produce paralysis of the body below that point. The intercostal and abdominal muscles are consequently deprived of motion, but the diaphragm retains its power, owing to the phrenic nerve arising from the spinal marrow above the seat of the injury. Now we find even the highest authorities in the profession affirming that the diaphragm, in these circumstances, is equal to carry on the respiration by its own action. We are not, however, likely to admit the correctness of such an opinion, after having just witnessed the effects which this muscle produces upon the chest, when it contracts without the consentaneous action of the muscles situated externally. It has been seen, that when left to act by itself, the diaphragm diminishes the area of the chest laterally, by pulling the ribs inwards, at the same time that it enlarges it longitudinally. Hence the act of inspiration can only be very imperfectly performed. But what shall we say to the act of inspiration? The abdominal musles being now paralytic, there is nothing to prevent the ribs, which have been forcibly pulled inwards by the diaphragm, and in opposition to their elasticity, from starting up as soon as it relaxes. Here, then, a considerable dilatation of the chest will be produced in the act of expiration. Again, in consequence of the want of action in the abdominal muscles, the lungs are left to be compressed solely by the receding of the viscera of the abdomen, impelled by their elasticity. When we reflect how inconsiderable this force is, we may be allowed to conclude, that the expansion of the thorax, consequent upon the resilience of the ribs, on being relieved from the action of the diaphragm, will be equal to its contraction by this slight cause; and, therefore, that in expiration, the space for containing the lungs will be enlarged in the same proportion that it is diminished.

It is thus apparent, that although the intercostal and abdominal muscles are paralysed, in these cases of fracture of the cervical vertebræ, the breathing does not take place by the diaphragm alone, but by other muscles, which, like it, derive their nerves from above the seat of the injury to the spinal marrow, which act powerfully in lifting up the ribs, and holding out their margins in opposition to its action, are left in possession of their full power. These are partly situated in the neck, and partly clothe the sides of the thorax itself; and in the natural play of the chest they act as accessory muscles to the intercostals. These are the trapezius, the sterno-cleido-mastoideus, and the serratus magnus anticus muscles: the first of them, the trapezius, draws back the head and fixes it; it also retracts the shoulders, elevates them, and keeps them fixed in that position. This may be considered as preparing for the action of the other two muscles; for the head being thus made a fixed point, the sterno-cleido-mastoidei, on both sides, are now enabled to act exclusively in raising the chest. Again: the shoulders being held fixed, they become the points of origin of the large fleshy muscles, the serrati, and allow these to act powerfully in raising and expanding the ribs. Accordingly, if we watch an unfortunate patient, who has met with the accident alluded to, and observe the manner of his breathing, it will be seen that he brings all these muscles into powerful action: the sterno-cleido-mastoidei are rigid and prominent; the shoulders are elevated nearly to the level of his ears; and the fibres of the serratus can be perceived, by the fulness and distinctness of its digitations, to be acting strongly on the ribs. The chest is thus heaved up with the same labour and distress which we may witness in a patient who has a fit of asthma, or is in danger of being suffocated by an obstruction in his windpipe. The action of raising and widening the chest by means of these muscles, prevents the diaphragm from drawing the ribs inwards and downwards. It does more: the elevation and dilatation of the ribs being effected in opposition to the elasticity of the bones of the thorax, the act of expiration can now be performed, even although the abdominal muscles

are paralysed; for as soon as the combined muscles of inspiration relax, the chest falls and the ribs collapse, and the air is expelled with an impulse from the lungs *.

It may be known to many of your readers, that the whole class of muscles which act in respiration have been long a subject of the highest interest to Sir Charles Bell, in his investigations of the functions of the nerves; and those muscles which we have been particularly noticing—namely, the sterno-cleido-mastoideus, the trapezius, and serratus magnus anticus—have been a principal object of his study, on account of the nerves which are distributed to them. The great peculiarity in the distribution of the nerves to these muscles, is, that they receive numerous branches from two distinct sources: both sets of nerves are ascertained to bestow the power of motion; and the question, therefore, to be answered, is, why should these muscles be thus superabundantly (as it would appear) provided with nerves? Why does not one class suffice? Now it was from being drawn to observe the manner in which these great muscles are combined in action during inspiration, that the suggestion naturally arose, whether this complexity of the nerves was a consequence of the connexion which they had with the organ of respiration. These muscles are not exclusively engaged in assisting to expand the chest; that is only, as it were, an accessory function: they are at the same time employed in moving the head, the neck, and the scapulæ, in the ordinary actions of the body. He inferred, from these considerations, that one class of nerves was provided to associate the muscles with the organ of respiration, and the other to control them in the common movements of the frame.

It is impossible to enter fully into the arguments which have been brought forward to corroborate this view of the distinct uses of the nerves supplied to these muscles. The study of this part of the nervous system constitutes, as I have already said, the most difficult subject in the whole inquiry, and cannot be done justice to in the limits of this communication. Yet it must have been noticed, as a most remarkable circumstance, in the case of the gentleman which has been related, *that the external muscles which combine in operation with the diaphragm during inspiration, were defective in their action only as connected with respiration, and retained their full power of contracting in the usual actions of the body, such as turning the head, raising the shoulders, &c. when they became rigid and distinct.* Is it too much to infer that one class of nerves only was affected — namely, that class through which the consent between these muscles and the others which are engaged in respiration is established? If the series of cases contained in the Appendix of Sir Charles Bell's work on the Nervous System be consulted, it will be perceived that numerous facts lead to the same conclusion—viz. that the nerves which influence these muscles, in their capacity of respiratory muscles, may be affected with various disorders, whilst the remaining nerves preserve their functions unaltered.

I have been induced to present this case to the notice of your readers, from the hope that the peculiarities which it exhibits, and the curious questions for inquiry which it suggests, may interest some of them, and lead to a more minute examination of the particular nerves that have been affected. It is somewhat remarkable that the question has almost been shunned by the profession—why is there such a complexity of the nerves distributed to the head, neck, and thorax? This is, indeed, a problem difficult to solve; yet it is one which cannot be passed over. It cannot be said that we know the function of any nerve in the body, unless we have ascertained what are the uses of the other nerves which accompany it to the same organ. The minds of medical men have been attracted, with extraordinary interest, to the discovery of the distinct functions of the roots of the spinal nerves; yet that very discovery points to farther investigations, which, although necessary to complete it, have been unaccountably neglected. The principle which resulted from this discovery, was, that the nerves which arose by distinct roots were endowed with distinct nervous properties: however much two different nerves might resemble each other in structure, if they were derived from different roots, and if they coursed toge-

* For a particular description of the manner of breathing in patients who have suffered fracture of the spine, see the cases in the Appendix of Sir Charles Bell's work on the Nervous System.

ther to the same organ, it was a proof that they were distributed there, not for the purpose of accumulating one kind of nervous energy, but for bestowing two distinct endowments. Again: when it was ascertained that the spinal nerves were possessed of the two qualities for which alone nerves seem to be required in the body—viz. the power of bestowing muscular motion and sensation; and when it was demonstrated that the fifth cerebral nerve in the head was in all respects a spinal nerve, or one of the same class; the question naturally arose, what is the meaning of additional nerves being provided to certain organs, when these appear, from their double origins and double functions, capable of performing all the purposes for which nerves are bestowed? If we perceive nerves, differing in anatomical character from the class of spinal nerves, arising from distinct tracts in the brain or spinal marrow, and distributed profusely to the very same parts that are directly and abundantly supplied by the spinal nerves, may we not fairly conclude that these "superadded" nerves are sent there to confer some new office, or to associate the parts in some new actions, for which the spinal nerves are not properly qualified? If this inference be admitted as correct, then, instead of resting satisfied with the knowledge which experiments alone may enable us to acquire, of the uses of the two roots of the spinal nerves, it is shewn that another process of investigation has yet to be followed. It has still to be learned what nervous properties the class of spinal nerves is competent to bestow, and what functions it is deficient in and cannot supply. Before this difficult point can be ascertained correctly, it is necessary to determine the nature of the actions in the several organs which require other nerves to be introduced amidst these double nerves. This implies an extensive examination of all the complicated movements and peculiar sensibilities which distinguish the organs that have these complex nerves. It was from seeing the necessity of pursuing this course of inquiry, in order to give accuracy to the results of his investigations, that Sir Charles Bell, before venturing to publish any of his views upon the nervous system, examined with the greatest care the various associated actions into which the muscles of the face, the throat, the windpipe, thorax, &c., entered; so that he was prepared, in the first paper delivered by him to the Royal Society, to explain what he conceived to be the peculiar functions of the "superadded" nerves, at the same time that he announced the proper functions of the spinal nerves and fifth pair. To those who are best acquainted with the importance, and at the same time the remarkable intricacy and difficulty of the inquiry into the "superadded or irregular" system, it will be a subject of regret that the mind of the profession has not been directed towards it more than it has been, as in so many instances it is these nerves alone which can interpret to us the symptoms of disease.

CIVIS MEDICUS

ON MEDICAL REFORM.

LETTER IV.

To the Editor of the Medical Gazette.

SIR,

BEFORE discussing the subjects named at the close of my last letter, as the intended topics of my next, it is fit that I try to redeem a nearly forgotten pledge given in a former letter, by shewing how the adoption of the representative principle in medical polity would directly or indirectly cause the speedy removal of the principal defects of present arrangements, and be therefore, in ultimate and sure effect, a reform as extensive and fruitful as we need now ask for from the legislature. This, then, I proceed to consider. Three different classes of considerations present themselves as witnesses in favour of representative or responsible oligarchy, as opposed to the extremes of self-elective or irresponsible oligarchy, and of democracy.

1. The known salutary tendencies and satisfactory working of official or vicarious free agency under responsibility, as evinced *(ex. gr.)* in the conduct of the majority of the Parliamentary representatives of large and intelligent constituencies. 2. The proved evil tendencies of irresponsible free agency, whether official or vicarious, as in self-elective councils, such as our Colleges;

or immediate and personal, as in purely democratic legislative and executive bodies, such as many of our ultra medical reformers seem to long for. 3. The obvious connexion of most existing abuses with the practice of self-election as their principal or sole cause. And it is the more incumbent on me to redeem that pledge, if I can, that, if I am rightly informed, the introduction of the representative principle into medical polity forms no part of the plans either of the heads of the leading section of the profession, viz. the Royal College of Physicians, nor of the more eminent malcontent licentiates, more especially of the forty-nine petitioners; and that, consequently, according to my views of professional politics, it will be but a struggle between the *ins* and *outs*, with "dignity of the profession," "honour of medicine," "public health," &c. for their war-cries, but private advantage for their sole or principal animating motive.

In proof of the advantages of official free agency under responsibility, I need say little. A glance at the comparative merits, as senators, of the peers of Parliament and of the popularly-elected members of the lower house; or of the latter class, and of those representing corrupt constituencies, will amply illustrate the doctrine—which are, on an average, the more assiduous, active, intelligent, and efficient as men of business, and the more public-spirited and honest as legislators? Compare, again, the peers of England as judges, with the regular judges of the land; or the bishops, as trustees or public officers, with their brother dignitaries of the law. On which side do we uniformly observe assiduity, efficiency, integrity; and on which almost as uniformly idleness, negligence, and inefficiency? Make what allowances you please, draw every fair distinction, and still will remain a difference between the two sets of samples of trusteeship, explicable only on the principle that the free agency of the one set of trustees has been stimulated and purified by responsibility, while that of the other has been left to sleep or wake, work good or evil, according to the whim, or taste, or private interests of the parties; and the same differences of results attend like differences of governing principle through the whole field of official action. Free agency, protected against temptation by proportional responsibility, is, in small things as in great, the living principle of all official integrity and public virtue; while irresponsible vicarious agency undermines at once the fidelity of the trustee, and the public or common interests of which he should be the zealous promoter and conservator; and the free agency of the members of a purely democratic body, whether deliberative or executive, is in no respect less dangerous to the common weal than the irresponsible power of self-elected officers or rulers. Democratic bodies are always in either extreme of listlessness or phrensy; torpid often; sometimes turbulent; never temperately, patiently deliberative: they are quite unfit for business. Like our peers, bishops, representatives of corrupt constituencies, &c. they are individually responsible to no one; and they have the further disadvantage of being, from their numbers, occasionally liable to the wildest impulses of party spirit, and other contagious emotions. But their general working is such, that under cover of the name and authority of an inert mass, an intriguing active few are in ordinary circumstances enabled to direct the course of affairs as may best suit their interest or convenience. And a superficial examination of the history of self-elective government, as exemplified in our professional Colleges and Hall, will shew practically in its effects the inherent viciousness of the self-elective irresponsible constitution — its subserviency to private interests, and indifference to justice and to the public good.

With regard to the College of Physicians, every one knows that the whole difference between a Fellow and mere Licentiate has long been substantially this, and no more—viz. that the former has graduated at Oxford or Cambridge, the latter somewhere else. The Fellow must have translated some Greek to satisfy the censors of his classical attainments; but in no other respect is he called on for proof of superior qualifications. Yet, under the protection of the self-elective principle, the fellowship has been enabled to evade every demand for justice, and defeat every attempt at law to compel them to admit into their society the Fothergills, the Wells's, &c. It is obvious that a self-elected and irresponsible body alone could have been thus culpably indif-

ferent to eminent merit, and so pertinacious in its exclusion from collegiate emoluments and honours. In like manner I account for the indifference of the College to the transfer of the bulk of its authority as guardian of physic, from Pall-Mall East to Blackfriars and Lincoln's-Inn-Fields. The College is no longer, in reality, the head of British medicine. For one medical license issued in Pall-Mall East, there are a dozen or a score from the mints in Lincoln's-Inn-Fields and the City. By this the College has been degraded: from sole licensing authority it has fallen so as to be but one of three licensing authorities; and from the smallness of its transactions, the least considerable of the three. Of the three bodies, the College of Physicians alone licenses for London only. By this transfer, medicine has been degraded; for by it a purely surgical education, or a medical education of five years' menial service and two years' study, has virtually been rendered equivalent to regular university studies, and the public interests have been endangered by it; since, in a practical point of view, the lucrative responsibilities of the practice of physic have been rendered—through the channel, too, of an examination by comparatively ill-qualified examiners—accessible to gentlemen of very imperfect medical training.

Now it is inconceivable that the College, if it were elective and responsible, and were animated consequently by even a moderate portion of true professional or public spirit, could have been blind or indifferent to these fruits of the Surgeons' charter, and of the Act of 1815. Other proofs of the unfitness of a self-elected government abound. Would a freely elected and responsible Board of Censors exclude, not only Surgery, but also Midwifery and Forensic Medicine, from its examinations?—even after their admission into the curriculum of Apothecaries' Hall? How is it that the Hunterian Museum is in the keeping of the College of Surgeons? How was it that the College of Physicians was one of the last bodies, instead of leading the way, in petitioning for the Anatomy Bill? Is Anatomy merely a branch of Surgery? Is it not rather the first pillar, as Chemistry is the second, of all medical science? And turning to the College of Surgeons, how is it that Medicine is but partially included in their curriculum? Are army or navy-surgeons practitioners of surgery only, or even chiefly? are they not all principally medical practitioners or physicians? How, then, is Clinical Medicine, the only branch of practical medical teaching, whose value is beyond dispute, excluded from their course of study? My answer is, and I can find no other, they are pure surgeons; know little of, and care less, for physic; and are as councillors or legislators for the surgical profession,—responsible to none for the indulgence of their antipathies or partialities. Again; to glance at Apothecaries' Hall,—how is it that menial service is elevated above regular study as a qualification for general practice? the Hall accepts of two years' study, but insists on five years' apprenticeship. How is this best accounted for? Is it for the dignity of medicine, or for the advantage of the public, or simply for the convenience of individuals entitled to take apprentices? Then, on what ground can be defended that indifference to invasion of the purchased rights of their licentiates, which is amongst the most scandalous misdemeanors of each of the three corporations? Any man may practice physic and surgery in London, in all their branches, provided he observe certain easy precautions in prescribing, and do not meddle with pharmacy; and, in the provinces, there is no check at all on unauthorized practitioners, medical or surgical, not dealing in drugs; while pure pharmacy is a common, over which every man may range at pleasure.

How is it that no attempt has ever been made by our governors to procure for medical defendants the protection of a medical jury? In prosecutions for alleged *malapraxis*, &c. the incapacity of laymen, unaided by disinterested professional judges, to adjudicate fairly, is quite notorious. How has it happened, that to this day the physician's right to remuneration stands on nearly the same legal footing as that of a domestic to his vails, or that of any other inferior rendering any petty service to his gratuity; while the surgeon and apothecary can appeal for protection against ingratitude or dishonesty to the laws of their country? Leaving out of consideration the heads of physic, whose numbers are necessarily small and prices

naturally monopolous, is it for the advantage of the average or common sort of physician that his patients should be his debtors in *honour* only, and not in *law?* The settlement of this point would require the fixation of a minimum fee, which must necessarily fall far below the amount of the nominal physician's fee—not exceeding one-third or one-fourth of the latter; and this has probably been thought inconvenient by those whose least daily remuneration is the highest coin of the realm; but would such settlement be on that account less advantageous to the minor physicians? the present scale of fees works well for the green and crude surgeon and apothecary, and for the eminent physician, while it condemns the junior physician to idleness and genteel penury.

Now with governments elected by and responsible to, their brethren, and through them to the general public, such faults of omission and commission would to me be inconceivable. In official life, responsibility and virtue are, it cannot be too much insisted on, parent and child; while irresponsibility always deadens the sense of duty, and prepares the way for positive breach of trust and flagrant abuse of authority. Representative government is the only form of polity worthy of intelligent societies. It is the only form that at once secures free agency to the ruler, and sufficient guarantees to the governed. It alone makes available to the common weal the best endeavours of the ablest men; and without compromising the dignity of private judgment, provides against dangerous errors and abuses. Under the elective system only are office and authority truly honourable, and subjection not degrading. To be elevated above his fellows by their own free choice, would be a distinction deservedly coveted by manly ambition; while in a self-imposed inferiority, there could be nothing to gall the most sensitive vanity. Between rulers so chosen, and the subject masses, nothing but harmony could prevail; and internal union, and public respect, and social influence, would redound to the promotion of our art, and to the advantage of its professors. If so great a boon as representative government were conferred on us to-morrow, and without any provision for vested interests, I am confident that anti-reformers, and what is the same, bit-by-bit reformers, would find their fears had greatly overrated the inconveniencies of the change. I firmly believe that under the elective system, a large proportion of the present metropolitan fellows would obtain seats in the governing council of the Royal College of Physicians, and have no doubt whatever that the present singularly-active and sagacious head of that body, would continue to occupy the first place in the society. With regard to Surgeons' Hall, likewise, I am satisfied that the great majority of the present councillors would resume authority under the new *regîme.*

In my next, I shall discuss the questions proposed at the conclusion of my last or third letter.—I am, sir,

Your obliged,
CIVIS MEDICUS.

London, Dec. 16, 1833.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

A Treatise on those Diseases of the Brain and Nervous System, which are usually considered and called Mental. By DAVID UWINS, M.D. Renshaw and Rush.

THERE is a family likeness in the literary offspring of our friend Dr. Uwins, which at once marks their parentage. It has fallen to our task on former occasions to act the part of professional adviser, and with the natural meekness of our craft, to point out certain defects and redundancies of style and composition which occurred to us; but our advice, though *gratuitous*, brought upon us the severe displeasure of the author; and we are persuaded that he will even now blame us for not being enamoured of a certain idiosyncrasy and *mannerism* which still lingers about this his last work. But we resolve to await with the necessary fortitude the outpouring of the vials of his wrath; and again venture to tell the Doctor, that, as a work of science, his book would have been better if written in sober seriousness. His sentimental effusions occurring in juxta-position with technical and matter-of-fact statements are really amus-

ing, while his jokes are, from the grave colouring of the context, "no laughing matter." However, it must be confessed that the book is really a good book, and we understand is rather popular, and pretty generally read; and this is perhaps the secret of some of the faults which, as critics, we have noticed—namely, that it was written to suit the market. And certainly, if one can write a readable book by indulging his own taste, he has a good claim to be pardoned for not having on all occasions the fear of the reviewer before his eyes.

That, maugre these strictures, we retain no ill-will towards Dr. Uwins, will, we think, be made sufficiently manifest by our presenting the reader with the following sample of his best manner; and could we absolutely say *sic omnia*, we should be ready to give more unqualified praise than we have done to the present treatise.

"There are some physical, and some more strictly and purely moral, conditions, which lead to insanity, but which will be best adverted to under the head of treatment; and we may conclude this section by remarking, that he will be most likely to be insured against melancholy, and madness, and demency, or the disorders which lead to them, who has learned the art of being happy with cheaply-bought pleasures; who cultivates a disposition to content, as opposed to that of querulousness; who assiduously keeps his nerves alive to pleasurable and dead to painful sensation; who preserves with the same assiduity a self-respect, not founded on any consciousness of strength without the interference of mightier aid, but on the conviction that the economy of Providence leaves much for himself to do, and much to be answerable for; who mixes religious sentiment with charitable conduct, and who is made to understand that piety is not to be measured by ardour of feeling, by strength of passion, or by a monkish seclusion from the elegancies and pleasures of social existence.

"If I should be told that all this moralizing is beside my mark, I rebut the charge. *Every thing* has to do with the subject more immediately under consideration, that may have either a direct or indirect connexion with the general welfare of the body politic, in consistency with the principles inculcated throughout the present essay, which, to give them force, have probably been sketched out even with caricature boldness—viz. that insanity is not a specific something, to be treated by its opposite specific; that it is not the mere assumption of so much disease and so much remedy that are to be taken cognizance of by the discerning and conscientious practitioner of medicine. I say that, in harmony with my anti-nosological notions, I hold it requisite to stretch out from particulars into generals—to consider that *all society*, and not merely the inmates of a madhouse, ought to have its ease and condition taken into account by a writer on mental malady—that it is especially, and most legitimately, the duty of an author thus engaged, to treat of man in general, from his cradle to his grave, and to endeavour at checking those early habits, and early associations, and early excitements, which, though formed with good meaning, are followed too often with dreadfully bad consequences."

In conclusion we may remark, that phrenology, or rather the modified view which Dr. Uwins takes of it, is made more interesting in our author's book than in most works that advocate that hypothesis.

Annales d'Hygiène Publique et de Médecine Légale. No. XX.

The present number of this interesting journal has been delayed in the publication for above two months, and it comes forth at last with a very limited, but a very elaborate supply of articles.

The first is an essay *On the Mortality of the French Soldiery of the Line*, by M. Benoiston de Chateauneuf, a writer who has ably illustrated many subjects of hygiène in former contributions; those on foundlings, galley-slaves, and trades injurious to operatives, are perhaps best deserving of commemoration. A great deal of learning and research is bestowed upon the memoir before us; it constitutes, in fact, a history of all that is known of the mortality of the French infantry, from the time of Philip-le-Bel, in 1302; in particular, the author considers the causes which appear to give rise to the mortality among soldiers, for it is a well ascertained fact that young military men in France are cut off at a rate much higher than that which be-

longs to individuals of the same period of life in civil society. Between the ages of twenty and thirty, foot soldiers in the French army die at the rate of 2·25 per cent. Is this to be attributed to intemperance and excesses? To a certain extent it undoubtedly must be: the soldier, in the flower of his age, has much to seduce him into irregularities. In his hours of relaxation he is but too often betrayed by his passions, and in the discipline to which he is subject attention to morals is hardly in any degree insisted upon. But excesses of drunkenness and debauchery, though frequent with the soldier, are not peculiar to him: there are other causes, of a much more special nature, which operate to the abridgment of his days. Forced very often, contrary to his natural habits and feelings, to join the army, he cannot but entertain, along with a hearty aversion for his new employment, a longing for the home and the haunts which he has been obliged to leave. In all his marches and countermarches this thought is uppermost—the distance that separates him from the paternal roof, and the time that must elapse before his return. The *morale* suffers, the individual languishes, falls sick, and dies, raving about his family and his distant friends. In 1757 there was a striking instance of this in the mortality which attended an adynamic fever among the militia of Mortagne, who were garrisoned at Maubeuge; and in 1805 a similar affliction decimated the young Bretons who were drafted to the Moselle. Suicide is also common among the military class, either resulting from the disgust of life just alluded to, or from an over-susceptible sensibility which is intolerant of the least reprimand; and reprimands, to say the least, are the young soldier's portion in the course of that discipline which demands of him the most perfect submission. It may be added, that wounds appear to contribute not a little to the mortality among soldiers, even in garrison, in times of profound peace; they are either inflicted by accident, in meddling imprudently with firearms, or still more frequently in the duels which are common among French soldiers when they quarrel. M. B. de C. gives some very curious details and calculations on the latter head. But we must leave this clever paper, and notice one or two others in the new number of the Annales.

Parent Duchatelet publishes here his report *On the Borings and Means employed for carrying off the Filth from certain Factories.* This is an elaborate paper, drawn up at the request of the French government, and it will be found to contain a vast quantity of information regarding a subject of primary importance to the public health.

A paper, entitled *Medico-legal Considerations on Monomania*, by M. Marc, is full of interest even for the general reader. It abounds with illustrations, derived from all quarters, and is well calculated to extend the reputation even of the very distinguished author. We observe among the numerous anecdotes in this article the following, which M. Marc says he procured while considering the celebrated case of Harriet Cornier. "M. R., a chemist, endowed with poetical genius, and of a disposition naturally gentle and sociable, voluntarily claimed admission into a madhouse in the faubourg St. Antoine. He was tormented with a desire to commit homicide: he frequently threw himself at the foot of the altar, and implored the Almighty to deliver him from such a horrid propensity. He could give no account of the origin of his mental disorder. When he felt the accession of the fatal desire, he was in the habit of running to the head of the establishment, and requesting to have his thumbs tied together with a ribband. Slight as the ligature might be, it sufficed to calm the unhappy R.; though, in the end, he made a desperate attempt upon the life of one of his keepers, and perished in a paroxysm of fury." M. R. it seems, left behind him a series of letters, in which he endeavoured to describe his internal sensations. They served to shew that the desire of homicide by which he was actuated was not founded upon any motive, upon any reasoning, but simply on a species of instinct. The letters themselves, which, M. Marc says, were highly curious, were submitted to Dr. Gall, and, it is to be regretted, are no longer forthcoming.

Of this sort of homicidal monomania, our own country, unfortunately, affords many examples; and the reader will not fail to remember an alarmingly serious number of cases of the kind which have latterly been recorded in the public papers.

The views of M. Marc on the subject are clear and distinctive. We must, he

thinks, admit the existence of two kinds of monomania; the one, that which operates by a kind of instinct; and the other, where reason, however perverted, predominates. The former leads the monomaniac into involuntary acts (the will being impaired); while the latter gives rise to actions resulting from an association of ideas.

Instinctive monomania is in general more difficult to be attested medico-legally than reasoning monomania. In the latter it is seldom that the patient seeks to deny or to disguise the action which he has committed, even where he may regret it. Not so with actions resulting from an irresistible instinct, which is usually found connected with a morbid state of the system. Reason may in this case preserve all its activity; it may abhor the action which instinct insists upon, yet be unable to resist it; nay, the reason is sometimes forced to become an accessary, by suggesting the means of accomplishing the object. Once the instinct has reached its highest point, so as to render the act inevitable, reasoning may, in fact, as in reasoning monomania, furnish all the combinations which characterize crime—intention, object, preparation, cunning—and, the deed being done, declining the responsibility. With all this, the symptoms of a disordered state of body are frequently so slight as to escape even the closest observer. If we add, that the accomplishment of the object appears in many cases to be a sort of crisis, followed by a rapid recovery, it will be allowed that there are circumstances connected with the case which require much consideration.

In illustration of these two species of monomania, M. Marc gives two cases, published by Dr. Mende in Henke's Annals. The first is briefly this: Catherine Olhaven was born of poor parents, living in a country village: she was weaned when six weeks old, in consequence of an attack of illness by which her mother suffered, and in which one of the symptoms was a desire to kill her child. This she proposed to accomplish by opening a place among the feathers of the bed, in which she might at once smother and conceal the infant; but her design was perceived, and immediately after a critical fever ensued, which lasted for some weeks. On her recovery, the mother could remember nothing of what had happened, and never, during the rest of her life, had a similar return of mental disorder. The child, Catherine, meantime grew up, and never remembered to have had any illness, except when labouring under small-pox: her sister, indeed, said that she had had worms. Her menses appeared late, but not irregularly. At the age of thirty-two she bore a child, had an attack of epilepsy, but with no apparent bad consequences, and in six weeks after went out as nurse in the family of a professor at Greifswald. Here she continued to suckle a child for about seven or eight months, when her menses reappeared, and her milk became scanty, so that the nursling began to suffer. This produced anxiety and illness; but there was a restoration subsequently in some degree. A short time after, a remarkable circumstance occurred: Catherine, one evening, while in the nursery with the child which was under her care, saw a knife on the table, and was immediately seized with a horrible desire to commit murder. She afterwards confessed that at the moment she felt a particular sensation in the stomach, and a heat in the head. She thought she heard herself commanded to cut the infant's throat: she shuddered, and fled into the kitchen with the knife in her hand. She begged one of the servants not to leave her, as she was filled with horrid thoughts. On returning to the nursery, the instinct two or three times returned almost irresistibly; and she was on the point of doing the murder, when interrupted by the entrance of some of the family. She was watched, and treated with cooling medicines; in a few days she recovered, but not without several recurrences of the murderous instinct, of which she was perfectly sensible, though unable to control her will.

In the second case, a lady, 43 years of age, the mother of six children, all her life enjoying good health, with perhaps little more to complain of than a headache occasionally about the time of menstruation, was one day, while apparently in the best humour, and occupied with needlework, seized with a paroxysm. She rose from her seat, screamed out that she would drown herself, and immediately ran to the *fossé* of the town, and plunged in. She was taken out immediately, but not before she had been rendered insensible. Proper means were adopted to restore her; but three days elapsed before she returned to her right reason. She then wept abundantly,

and was impressed with an obscure remembrance of what had occurred. No similar accident happened to her afterwards, though she lived for several years.

Both these examples are important, as demonstrating very clearly the nature of instinctive monomania: in the first, the train of circumstances was gradual, and could in some measure be followed; but in the second, it was sudden, and perfectly unexpected. There was, besides, something hereditary in the first case; while in both, there was reason to suspect the condition of the nervous system. Suppose that, in the former case, the bodily disorder was less traceable, and that no fortunate accident had interferred to prevent the commission of the crime to which the patient was so strongly impelled, what would have been the judicial decision? No doubt, as opinions are ordinarily formed on such cases, it would have been maintained that the woman, not having shewn any symptoms of being on any former occasions deranged, as she had not been since, the deed must have been *voluntary*, and she must be held *guilty*.

To the subject of incendiary monomania, M. Marc devotes a large portion of his paper. All his instances are curious, and selected with much industry from native and foreign (particularly the German) annals of crime. The tendency of the author's reasonings is marked with a humane as well as an enlightened spirit: his views are specially directed to the means of improving the criminal code; and legislators of all countries, we think, might avail themselves with much advantage of the able hints which are here supplied.

MEDICAL GAZETTE.

Saturday, January 4, 1834.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

ILLUSTRATIONS OF CONSISTENCY:

MEDICO-CHIRURGICAL REVIEW AND THE LANCET.

OUR readers may have gathered from the concluding paragraph of our leading article last week, that Dr. James Johnson had made an attack upon this journal in some unwonted manner. It consisted of an attempt to shuffle himself out of the very absurd position in which he was made to appear before the public, in our demonstration of the total inconsistency of his present opinions with those formerly entertained by the Editor of the Medico-Chirurgical Review; and this effect he attempted to produce by addressing himself to the sympathy of the Westminster Medical Society, founding his defence chiefly on the assertion, that he was not the writer of the article brought in evidence by us against him. By adopting this unusual place and mode of appeal, he secured the advantages of being surrounded by his own little coterie of followers—of speaking where he was secure against the danger of having his arguments confuted—and of having his *ex parte* statement published by those who, while they invariably insert every charge against us, have never in any instance had either the honesty or courage to admit our reply—we mean the *Lancet*, and its very simple follower, the *Medical and Surgical Journal*. All this our worthy contemporary had the cunning to effect by this manœuvre, in addition to the command of his own journal. We have thus a triple alliance against us, Wakley, Johnson, and Ryan, all engaged in the plan of levelling — radical abolition against rational reform. Be it so; let the members of the combination do their worst: we throw down the gauntlet, and defy them.

But Dr. Johnson says he does not mean to continue the discussion, and that the Gazette may "fire away under the certainty that no shot will be returned." This is really very magnanimous. Dr. Johnson does not disdain to address a public meeting in a set speech against this journal, where there was no one who could contradict him;—he does not

despise making his attack in such manner as to secure its publication in both the other weekly medical journals;—he does not neglect to write a long article, in his own review, filled with gross misrepresentations of our opinions, and with mistaken and unwarrantable assumptions as to our individuality, and when the train is thoroughly ignited, he affects moderation, and then coolly tells us that such controversies are "injurious to the profession generally." Possibly it may be so "*generally;*" but there are some exceptions to be found; some particular instances, no doubt, in which the parties hope to be gainers; for, in addition to all that we have mentioned, the newspapers have been induced to take up the cry, *and, in fact, a regular system of intimidation has been begun.* An appeal has been made to general practitioners to prefer particular parties in their consultations, and to avoid others,—mentioning as their especial friends, "*Drs. James Johnson, Somerville, and Epps—all men of the highest talent in their profession**"; while the views of others (also mentioned by name,) are most grossly and most scandalously misrepresented. We can readily believe that it may suit Dr. Johnson's purpose to decline further discussion at this particular moment, but it does not happen to suit ours.

The immediate point to be considered at present relates to the subject of medical reform, as connected with him who, from the opponent, has become the partizan of Wakley—with him who has charged us with attributing opinions to him which he does not, and never did, entertain; of course we mean the Editor of the Medico-Chirurgical Review. With Dr. James Johnson, as an individual, we have nothing to do; but when he steps out of his private sphere, and perks himself up as an authority and a champion, attempting to hurry the profession into a path which cannot but lead to intemperance and anarchy, then we see in him a person calculated to injure that cause in which we are most deeply interested—that of free, and fair, and rational medical reform. And as we have been most falsely designated as anti-reformers, we here distinctly declare that by *reform* we understand a thorough and searching inquiry into, and improvement of, our professional institutions;—such as shall give to all among us those rights and privileges to which we conscientiously think them entitled, and which it shall be our humble effort to support them in endeavouring to procure; neither restrained by the bigotry of the ultra conservatives, on the one hand, nor led away by the overheated visions of the levellers, on the other.

As the hands of the old tory government were strengthened, and the great cause of reform kept back for years, by the intemperance of demagogues, so it becomes us seriously to consider, whether the same agency may not even now be at work in our particular department, and the zeal of weak, or the violence of unprincipled men, be hurrying the profession into measures so palpably absurd as to enable those opposed to all change to say to the legislature, "Behold the spirit of those who call themselves reformers; they demand that you should abolish all existing institutions; their object is not to *re*-form, but to destroy—not to open a road by which they may acquire elevation in virtue of their attainments, but to level all distinctions, as a simpler mode of preventing any from being above them!" This is the evil which we not unreasonably fear; and as it is notorious that the cause of reform must stand or fall mainly by the conduct of its supporters, we shall not hesitate to denounce any one, and every one, who appears to us, either from his own talents or accidental circumstances, calculated to do harm. Among these, the latter causes

* See Observer of Sunday last; Morning Chronicle and Morning Post of Monday.

have given a prominent place to the Editor of the Medico-Chirurgical Review; and as he has employed every means, as above shewn, to counteract our efforts and gainsay our arguments, it becomes of importance to the great questions at issue, that we should bring the value of his support to the test, that those of his own party, as well as the rest of the medical world, may take it for what it is worth, and judge accordingly.

It was our object to shew, in a former number (Dec. 21), that the levelling doctrines now advocated by Dr. James Johnson—be they good or bad—are diametrically opposed to those formerly maintained by the Editor of the Medico-Chirurgical Review; and this position we established in the most irrefragable manner, by quotations from his own journal, which we placed against extracts from his recent speeches. In this dilemma, Dr. Johnson endeavours to evade the proof of inconsistency, by asserting that he did not write the particular passages which we quoted. But the article alluded to was *editorial;* the question therefore arises, to what extent the editor of a periodical is answerable for sentiments which appear in his work, stamped with this avowed and received marked of his adoption? Suppose an editorial article had appeared in Wakley's defunct newspaper the Ballot, which was at variance with the politics of that worthy as maintained upon the hustings, and it had been addueed as an instanee of inconsistency, that the Editor of the Ballot was opposed to Mr. Wakley, does Dr. Johnson imagine that the voters would not have laughed his new ally to scorn had he assumed as a ground of defenee, that he had not written the artiele in question; and that with "edited by Thomas Wakley" upon the title page, staring the reader in the face, he would have dared to throw off the responsibility upon another of that to which he had thus given the authority and sanction of his name? Yet such is precisely the course adopted by Dr. Johnson, when we contrast his opinions with those of the Editor of the Medico-Chirurgical Review!

All artieles, he says, are not written by the same person—of course not; no one, we presume, ever supposed that they were; but when the editor of a journal adopts what is offered him by his *employés*, gives to it the *editorial* character, and sends it forth to the world in the same garb as the other editorial compositions, it is quite clear that it becomes part and parcel of his doctrines, and is to be received as indicative of the sentiments of him by whom the journal is conducted. How else, in the name of common sense, would it be possible ever to ascertain the principles of any publication? We deny then, *in limine*, the validity of the defence; we disavow the right of any editor to give an article as his own, and with his own, and then, on its being attacked, to attempt by any *after-passage* to disown it—content to take the merit of another's talent while he thinks it calculated to do him credit, and shrinking from the responsibility when called upon to defend it.

So much for the general custom and received understanding upon this point: now let us consider the usage as regards Dr. Johnson's journal in particular. The work consists of reviews, reports or records of passing events, and editorial observations relating to medical politics and other general subjects. Such articles, of course, cannot all be written by the Editor; but on turning over the leaves of his volumes, we find frequent notes appended to particular reviews, &c. informing the reader that the Editor does not agree with the reviewer; or even with respect to the account of a public meeting, we are told that it is to be received merely as the record of a reporter. The natural inference

from this system of disclaiming that in which the Editor does not concur, is, that he does concur unless he so guards himself; and if this be true with respect to ordinary subjects, such as reviews, how much more strongly does it apply to those editorial articles, properly and peculiarly so called, which indicate the principles of the publication? The article we quoted was, we repeat, editorial, and not disavowed or qualified in any way whatever — although we are now told that it contained sentiments diametrically opposed to those of the Editor.

A poor parasite of Dr. Johnson's says the article was "anonymous;" and so, in one sense, are all articles in the Review; but he ought to have known his patron better, and how he disdained to become the medium of secret unacknowledged attacks. "We do not hold ourselves justified (says the Editor of the Medico-Chirurgical Review) in publishing *anonymous* animadversions, whether on public bodies or private individuals*." Now the article alluded to was a severe sneering attack upon Mr. Lawrence, which, if not editorial, was, as assumed by our opponent's blundering apologist, "anonymous." How, then, we request to be informed, did it come to be admitted, in the face of his own prohibitory ban?

Dr. Johnson, however, goes farther than a bare denial of the authorship for himself, and attributes it to a deceased friend—the *late* Dr. Dill. This is more remarkable than the disclaimer itself; and as we happen to know a good deal about that gentleman's history, we must say that if the assertion had come from any other source, we should not have held it entitled to one moment's credit; but as it is, we must suppose that there is some mistake. Nevertheless, so many *ifs* and *buts* crowd upon us, that we cannot divest ourselves of the impression that Dr. Johnson's memory has proved treacherous on this occasion. Let us try to refresh it a little.

Considered in the abstract, indeed, it is a matter of no moment whatever who wrote the article; but the point acquires an adventitious importance owing to the particular purpose for which it is now attributed to Dr. Dill.

The article in question was published on the 1st of January, 1827, and must have been written towards the close of 1826, as it refers to opinions of Mr. Lawrence delivered in October of that year;—*but Dr. Dill did not come to London till June* 1827! Having few or no acquaintances in London, he brought letters of introduction from some friends in Edinburgh to medical men here, in one of which he is stated to have come to London "on speculation," having, in fact, completed his education but a short time before. Now, it was not *till the following year* that he was engaged to write for the Medico-Chirurgical Review, — a fact which we gather both from the circumstance, that in August 1828 he sent a copy of a review of Mr. Lawrence's paper on Erysipelas to some of his friends, informing them that he had then "lately" begun to occupy his leisure hours in writing for Dr. Johnson; and we also learn the same fact indirectly from the Editor of the Medico-Chirurgical Review himself, who, in a notice of Dr. Dill's death, published in July 1832, informs us, that the deceased had been engaged in writing for his journal "during the last four years," *i. e.* since the summer of 1828, corresponding exactly with Dr. Dill's own statement, *and a year and a half after the publication of the article now attributed to him.*

Dr. Dill, as we have said, sent his review of Mr. Lawrence's paper on Erysipelas to various friends, and there

* Editorial notice, Med.-Chir. Rev. vol. v. p. 635.

are two remarkable circumstances hinging upon this, as connected with the subject at issue — namely, the style of the composition and the sentiments expressed towards Mr. Lawrence. The style is strongly marked: it is full, fluent, and graceful. Dr. Johnson's style also is peculiar—but its characteristics are of a different kind; and, what is curious, they exist in full perfection in the disowned quotations, so that the writer must have thought, that in being clothed with the editorial garb, it behoved him to assume the editorial gait; while he had done this so successfully, that we are well assured he has travelled over town and country ever since without once being detected. Again, this same article which is now fathered on Dr. Dill, was in the last degree taunting and contemptuous towards Mr. Lawrence, pretty broadly insinuating that he was a fit subject for the "New Bedlam;" whereas, in the acknowledged review, that gentleman is spoken of in terms of the highest respect; and, what is more remarkable still, when Dr. Dill, not long after he settled in London, was attacked with serious illness, and required a surgeon, Mr. Lawrence was the one selected to attend him, to whom, after his recovery, he addressed a letter, in which he expresses his "warmest acknowledgments," attributing to him "his health, and probably his life."

We are further told by some of Dr. Johnson's backers, that Dr. Dill must have written the article, because he entertained tory sentiments; implying that he was therefore opposed to Mr. Lawrence and reform. Now, unluckily for this, it happens that the Dr. had strong *radical* propensities, was a great admirer of Mr. Lawrence, and entertained opinions just the reverse of those in the paper attributed to him. One weak brother of Dr. Johnson's informs us that the paragraph alluded to was certainly Dr. Dill's, and states in proof of this that he wrote the "alarming article upon Cholera in the Quarterly Review." The precise connexion between the premises and the inference, we leave it for others to determine, and shall content ourselves with merely stating that our sagacious critic has made a trifling mistake. Dr. Dill did not write the article on Cholera*, nor any other in the Quarterly Review. It was the WESTMINSTER in which Dr. Dill wrote; the *radical*, instead of the *tory* journal — a circumstance which makes some small difference in the application of the argument.

Such are the chief considerations which would have prevented us from regarding it altogether probable that the authorship of the article in question could have lain with Dr. Dill; and, considering all the above circumstances, we can only say, that if Dr. Johnson's memory has not deceived him, and Dr. Dill did write the article in question, his sentiments on medical politics, and his feelings towards Mr. Lawrence, must have undergone as rapid a change as his style had a remarkable improvement.

But our history of the disowned quotation is not yet quite finished; and we shall next crave attention to certain circumstances which led us to think that the editorial sentiments, which we quoted, were not only adopted by the Editor of the journal in which they appeared, (though this, of course, was enough for the use we made of them,) but which, we candidly confess, had induced us to believe that they were the production of his own proper pen.

The Lancet (the editor of which naturally backs his new friend) gives an *amended* edition of his oration against us, which is headed, "Dr. Johnson and the Fabricator." Fabricator, we would ask, of what? The only thing which Dr. Johnson ac-

* We make this statement on authority.—ED. GAZ.

cuses us of fabricating—if that is to be the word—is the assumption that an editorial article in the Medico-Chirurgical Review was written by the Editor of the Medico-Chirurgical Review! and this brings upon us the courteous appellation of fabricator. Well, be it so. Now with whom, gentle reader, think you the fabrication originated? Not with us (our claim to originality extends not so far)—not with us, *but with the Lancet itself!* In his number for March 17th, 1827, Wakley takes the very article *our* attributing which to the Editor of the journal in which it appeared, is now called a fabrication, and assigns it to Dr. Johnson by name, and in terms too contemptuous for us to copy. The attack is long, abusive, and scandalous; and we have great difficulty in selecting any portion of it free from epithets too offensive to be repeated. One short specimen, however, which contains less Billingsgate than the rest, will serve to shew that the article alluded to is the same; and situated as we are by the course which Dr. Johnson has adopted, we are compelled, in self-defence, to advance nothing without the accompanying proofs.

"We now pass on (says the Editor of the Lancet) to page 266; and here, to our no small amusement, we find our medical Quixote fairly in the field of controversy with no less an opponent than Mr. Lawrence—Olympus to a mole-hill. * * * Hear the creature:—'*but the fact is, that Mr. Lawrence's scheme in medicine is just what the scheme of Cobbett and Hunt is in society at large*—EQUALITY.' * * * If (resumes the Lancet) COBBETT and JOHNSON were to commence the Spencean system to-morrow, Jemmy would be blacking the shoes, boiling the kettle, or grooming the horse of the political Leviathan before that day fortnight; and if he were obstreperous, these would not be the worst of his occupations. We are really at a loss to conceive why Johnson should speak so contumaciously of the general practitioner*."

* Lancet, March 17, 1827, pp. 771 and 772.

Now, as at the time this appeared Dr. Johnson had not come to the understanding which it seems, by his own account, he has since formed with Mr. Wakley, he was in the habit of answering what was published in the Lancet, and, of course, of indignantly denying any statements or opinions falsely attributed to him. Did Dr. Johnson *then* deny the authorship of this paper, when thus directly and specifically accused of it? *He did not.* But it may be said that it escaped him, amid the measureless abuse formerly heaped upon him by his present "bold and indefatigable*" coadjutor, or that he passed by the whole article in silent contempt. This, though very improbable, might have been admitted as at least possible, had not the fact been that he did answer the article at the time, *but did not deny the authorship!* He denies one thing—namely, the misstatement of his feelings towards general practitioners, as contained in the last sentence of the above quotation; *he gives the sentiments of the Editor as representing those of the writer* attacked by the Lancet—and thus completely identifies himself with the passage in question—while he leaves the direct imputation of the authorship unrefuted and untouched†!!

Such, then, are our *ifs* and our *buts*—and we submit that they are tolerably strong.

But before quitting this part of the discussion, we think it but fair to state the reasons assigned by Dr. James Johnson in order to shew that we ought not to have attributed to him the passage we quoted as that of the Editor of his Review. They are, first, that the same volume of the journal contained a paper "avowedly in the name of the editor himself, and distinctly stated to have been written by him, in which he maintained every

* Terms applied to the Lancet in Med. Chir. Review for January 1834.

† See Med. Chir. Rev. April 1827, p. 638-9.

iota of what he lately contended for in the Society;" or as he expresses it elsewhere, "a long paper, not anonymously, but avowedly as his own, in which he maintains all the opinions contained in his late speech*;" and secondly, by implication, that he had, in repeated instances, expressed similar sentiments. *We positively deny both these positions.* In the first place, there is no paper of any kind given in his name: we are only led to presume that what is referred to may be Dr. Johnson's, because he says it was written "by the Editor"—an inference the justice of which he seems to admit or to deny as suits his argument. But what is of more importance, on a deliberate perusal of the paper, we find nothing whatever in it to warrant the use now made of it — nothing, in fact, more than this, that Dr. Johnson then, as now, maintained the unity of the healing art —the necessity of the practitioner in physic having a knowledge of surgery, and the practitioner in surgery a knowledge of physic—doctrines which we believe no rational person of the present day disputes. Those are the points at which he labours in the paper to which he refers—and labours, too, as earnestly as if the opinions were either in any degree new, or in any degree peculiar to himself. But of his more recent discoveries — of those views which we have controverted, we find not one word—not a syllable about "*levelling upwards*"—not a sentence about one common "*maximum education*" — not a "hint of an indication" touching *the universal doctorate.* But these, and not the abstract unity of physic and surgery, are the points, as all our readers well know, against which we contend with Dr. Johnson; and when he comes forward, and specifies that he has maintained "every iota" of them before, and refers to papers in which he does no such thing, we can only regard it as intended to throw dust in the eyes of the public, few of whom will think of turning to his references, and many of whom will thus take for granted what they would *not* find in them. The truth is, that in the very paper to which he thus triumphantly refers, Dr. Johnson only argues as to the education of those intended for the different departments of medicine that it should be the same, "or as nearly so as possible," and concludes with the acknowledgment that the division of labour is "advantageous to the public, and beneficial to science;" and again, says he, "in no possible way can we have any natural or just distinctions between physic and surgery, *and yet I do not object to the distinctions in practice**."

But while we *do not find* any of Dr. Johnson's new levelling views in any part of his journal until within a very recent date, *we do find* many editorial articles directly opposed to them, and in keeping with that which we formerly quoted. Take, for instance, the following, as illustrating his disapprobation of that *maximum* of education for which he now contends:—

"We must not legislate for those alone who are endowed with superlative talent. Every man is not a Crichton. We must adapt the scale of acquisition to the general run of mankind, leaving genius to outstrip its cotemporaries, and shine—

"———— veluti inter ignes
Luna minores †."

Again:

"No doubt it is advantageous to the Fellows of the College of Physicians, to have a University education; but to expect this in all ranks and classes of medical society, is perfectly Utopian. What remuneration would nine-tenths of general practitioners have for such an expensive education‡?

Further:

"It is to be remembered that a large

* Med.-Chir. Jan. 1834.

* Med.-Chir. Review, vol. vi. p. 571-3.
† Ibid. Jan. 1828, vol. viii. p. 240.
‡ Ibid. p. 242.

number of those who will appear at its tribunal (viz. Edinburgh College of Surgeons), are destined to minister to the lower and the poorer classes; who will not, nor cannot, afford a remuneration for the acquisition of accomplishments. If the expense of medical education be carried beyond certain limits, many will despair of conquering the obstacles that the *res angusta domi* has planted in their path, and either abandon the profession altogether, *or practise it in an unqualified and empirical manner. The poor will thus become the prey of quacks* *."

Again, ridiculing his present friends, he tells us that

"A luminary of the radical press * * * calls upon the medical profession to rise *en masse*, 'physicians, surgeons, and apothecaries, either to establish a *new* and more liberal College of Physicians and Examiners, or to ameliorate and rescind the offensive regulations of the old one.' The radical press has unquestionable power to *call* spirits from the vasty deep, but, query, will they come? *Nous verrons.* There may be defects in the College of Physicians, as in all other human institutions; *but heaven defend us from the democracy of the* MEDICO-RADICALS! There is little danger, however, that these gentry will be listened to, either in or out of parliament.

"Non tali auxilio, nec defensoribus istis
Tempus eget ————." †

Is it possible for any one acquainted with the habitual style of the Medico-Chirurgical Review, not to recognize its peculiarities in this extract—even to the reference to Shakspeare, the two or three French words, and the scrap of Latin, huddled together, and very nearly all got into the same sentence? And again, we ask, is it possible for any man to have penned sentiments more absolutely at variance with those now maintained by Dr. Johnson?

It is notorious that quotations of a similar nature might be multiplied almost indefinitely, because formerly no opportunity was omitted by the Editor of the Medico-Chirurgical Review of holding up Dr. Johnson's present friends to ridicule. In noticing one of their meetings he tells us, "it will convulse the profession with laughter" to hear how they went on;—and that it "will probably open the eyes of the RADICAL LEVELLERS in this country*". Now, that this was written by the Editor himself, is put beyond a doubt, because he had to make an apology to a gentleman †, whose name had been improperly mentioned in it. Another article, in which what is now called an "aggregate" reform meeting is spoken of in terms of great contempt, *and even the expediency of granting the elective franchise to the members of the College of Surgeons called in question*, is also proved to be the Editor's, by his especially referring to it in another part of the same number, as containing "our own sentiments‡." In fact, to those who know any thing of the Med.-Chirurgical Review, it must be quite superfluous to point out the utter discrepancy between its sentiments, both as to persons and principles, and those now advocated in the same quarter. We are restrained, besides, from giving further extracts, partly in pity to our readers, and partly by this consideration—that to do so now would be in vain, as, after the line of defence set up by Dr. Johnson, it would be merely exposing ourselves to be told that whatever we quoted had been written by the late Dr. Dill. One short passage more, however, we *will* give, just to shew that we do not make these assertions without sufficient grounds; and the reason we select it in preference to others which are stronger, is because *it*, at all events, could scarcely have been written by Dr. Dill, inasmuch as it refers to an event which took place six months after he was in his grave §.

"Turn which way we will, we meet

* Med.-Chir. Rev. Sept. 1829, vol. xi. p. 556.
† Ibid. vol. vi. p. 270.

* Medico-Chirurg. Review, Dec. 1828, p. 305.
† Mr. Hensleigh, of Gloucester-Place.
‡ Med.-Chirurg. Review, April 1826, pp. 581-7.
§ The delivery of a lecture by Mr. S. Cooper.

the same subdivisions continually increasing with the progress of society. Is it natural to expect that medicine can resist the operation of a law so general and so powerful? It is not; *and we repeat that the idea of annihilating the distinctions of physician and surgeon, is at once preposterous and impotent.*" And again: "Such a notion argues an utter ignorance of the natural progress of civilization, and the entertainers of it might as well proclaim at once that they think the establishment of Owenite communities possible *."

Thus, then, even hampered as we necessarily are by the Editor of the Medico-Chirurgical Review having found another on whom to father his editorial opinions, we have adduced proofs which, to every unprejudiced mind, must be convincing that the sentiments of that journal, at no distant period, were very different from those now advocated by Dr. Johnson.

One point more, and we have done. Dr. Johnson stated to his astonished hearers at the Westminster Society, that he had entered into an arrangement with the Lancet; but in the account which has been published of this, a good deal of *dressing* has been had recourse to; and the distinct avowal that overtures had been made and mutually accepted, is glossed over in the number of his Review, which has since appeared, in very vague and general terms. The editor of the former journal, indeed, probably did not thank his new ally for this display of his candour, being much too shrewd not to perceive the unenviable light in which it places both parties. Had we been Dr. Johnson's "enemies," as he is pleased to insinuate, we (who have long been aware of the understanding alluded to) should not have left it for him to make the announcement; but we suspect that he has been his own greatest *enemy* in an affair which, after the manner he had been trampled in the dust by his opponent, is calculated to excite other feelings than those of anger. From this unpleasant view of the subject, however, we turn to that which is more amusing. Dr. Johnson, it seems, piques himself upon his consistency — some tolerably striking proofs of which we have adduced—and we find the same peculiar vein running through this transaction also. To Dr. Johnson, his controversy with the Editor of the Lancet, whom he designates as his "indefatigable and bold contemporary," is a subject now only to be mentioned with "deep regret," as having been "disadvantageous to society and to the profession." But the Editor of the Medico-Chirurgical Review, on the contrary, says, "a review of our whole conduct during a five years' contest with the organ of professional defamation, harrows up not a single unpleasant reflection. We denounced it in its origin—we opposed it in its progress—we defied it in its zenith—but we shall spare it in its fall*." How different this magnificent flourish from the language in which, but a few nights ago, he announced that he had sought for an amnesty—thus proclaiming to the world at once his transgressions and his sufferings—his repentance, and his pardon!

To be sure, all this is rather contradictory; but what of that?—all men ought to be open to conviction; and suppose even Dr. Johnson himself should have changed, he will still find the Editor of the Medico-Chirurgical Review ready to assist him: nay, one would almost suppose he had anticipated what has happened, for that gentleman some years ago wrote an apology for apostacy, which we now offer in behalf of our opponent in this controversy:—

"When," says the Editor of the Medico-Chirurgical Review, — "when a man changes his party, his tenets, or his professions, he lays himself open to the charge of inconsistency, and some-

* Med. Chir. Rev., vol. xviii. pp. 225 and 226.

* Ibid. vol. x. Jan. 1829, p. 498.

times of more serious insinuations; but for our own parts we see no cause for censure in such cases, unless the motives which prompt to the change of sentiment be proved to be corrupt. Mutability is one of the most distinguishing characters of the human mind; and where is the man who has resolutely clung to the same opinions through life*?" Where, indeed? we echo;—and who, we farther ask, could reasonably require more consistency from Dr. James Johnson than from the author of this passage?

It is rather a puzzling case for our contemporary, certainly, to maintain the consistency to which he lays claim, and yet keep on terms both with the Lancet and Gazette. But as there evidently is inconsistency *somewhere*, he has valorously charged it against this journal, inasmuch as at one time "not one word was ever uttered to his disparagement;" whereas of late we have lost "no opportunities of censuring and even abusing him." But, he says, "there are reasons for these things," and then proceeds to assign a motive for our conduct—namely, the understanding which had taken place between the Lancet and the Medico-Chirurgical Review, and the consequent "arrest of all feeling of enmity between the two journals." This representation of the circumstances, as given by Dr. Johnson, constitutes a curious combination of truth as to facts, and fallacy as to inferences; he is right in connecting our opposition to the principles of the Medico-Chirurgical Review with the treaty of peace between that journal and the Lancet (though we positively deny that any expressions to which the term "abuse" can be applied with justice, have ever escaped us regarding him)—but he is wrong in adducing this as an illustration of any hostility to him personally, or of any inconsistency on our part; indeed, it proves just the reverse as to the latter. Thus:—Wakley establishes a journal containing certain principles:—Dr. James Johnson opposes those principles, and invokes heaven and earth against them. We also conduct a journal on political principles opposed to those of the Lancet; and of course we *do* attack our opponent, and *do not* attack him who is fighting by our side. But in process of time the courage of our ally, like that of Bob Acres, "oozes out at the tips of his fingers," so that his pen cannot indite a single sentence in support of the cause he had embraced; and, after a little vacillation, he fairly goes over to the enemy, and advocates the doctrines he had formerly denounced in terms far less measured than any we ever employed. Now we do not war with *persons*, but with *opinions*. We have from the beginning been opposed to the Lancet, not because it was conducted by Mr. Wakley, but because we disapproved of his principles on many great questions connected with our profession. Dr. Johnson has now embraced those principles, and therefore we equally oppose *him*. There is inconsistency, certainly, in all this, but it lies not with us*.

Now as we are in reality very good-natured personages, for all that the members of the *triple alliance* may say, we shall help the Doctor out of the dilemma. Let him cease to play second to Wakley—or, in the language of this worthy, in once likening our contemporary to the Vicar of Bray—let him cease to be one "who now preaches doctrines which he formerly denounced as damnable heresies†;"—let him not step forward to distract the profession with his visionary doctrines of levelling, whether *upwards* or *downwards;*—let him continue to make his journal that accumulation of facts which has gained for it

* Med. Chir. Rev. vol. ix. p. 551.

* If our statements regarding the sentiments formerly entertained by the Editors of the *Lancet* and *Med.-Chir. Rev.* for each other be called in question, we shall publish parallel passages from the two journals in illustration.—Ed. Gaz.

† Lancet to Dr. Johnson, vol. xi. p. 46.

the extensive circulation which it has, and which, thus conducted, we hope it will ever maintain;—let him do this, and we shall be kinder to him than his former tormentor; for without waiting for any "overtures," we shall bless him with the mercy of our silence; and while we shall again be able to respect him as an editor, we shall suffer his little sayings and doings as an individual to follow, undisturbed, their natural course into oblivion.

To conclude: till Dr. Johnson can prove that all the passages we have quoted, and many more besides, were written by Dr. Dill—both those which were published before he came to London, and those after he was dead,—and farther, till he can satisfy us that a man may at once be the editor and not the editor of his own journal,—we must disallow his claims to having "resolutely clung to the same opinions through life;" and hold, that whatever his merits as a reformer may be, that of consistency does not rank among them. As to the rest, he may get the Lancet, and the Medical and Surgical Journal, and the Medico-Chirurgical Review, to support him; he may go to all the societies in London in succession, to make orations against us; but while his name, which is stamped upon the title-page of his Review, as editor, remains uneffaced by his rhetoric, we still shall say to him —

"Till thou canst rail the seal from off the bond,
"Thou but offend'st thy lungs to talk so loud."

INSULT OFFERED BY THE LANCET TO GENERAL PRACTITIONERS.

We want words to express the disgust which has been excited in our minds by the perusal of a paragraph in the Lancet of last week, addressed to the "Surgeons and Apothecaries of this metropolis." It is but one paragraph, and yet contains a quadruple FALSEHOOD. First, a sentence is quoted, and attributed to a gentleman, who, so far as we know, never read it—but that is his affair; secondly, it is given in the Lancet as if it had been editorial in the Gazette, though the passage is from the letter of a correspondent; thirdly, it is quoted as advanced in support of opinions which the writer in the Gazette argues against; fourthly, the passage, as it appears in the Lancet, is a FORGERY—the words and meaning being totally changed to effect the purpose of misrepresentation! The position of our correspondent was, that if matters had been properly arranged, the College of Physicians should have licensed as physicians those whom the present law has sent to Apothecaries'-Hall for their qualification to practise physic.

Here is the original passage, as given in the Gazette of December 21:—

"Instead of 200 licentiate physicians, 1000 surgeons, and more than 2000 apothecaries, all engaged in the practice of physic in London—for which, however, the first 200 only are *ostensibly* qualified by appropriate studies and examinations—we should have some 1500 or 2000 physicians of both classes, 400 surgeons at the outside, and some three or four hundred apothecaries, *or properly educated pharmacopolites.*" — *Medical Gazette*, Dec. 21, p. 447.

Here is the forged passage, as given in the Lancet of last week:—

"What is the language held in the Excrescence of last week?—why, that 'out of upwards of three thousand two hundred licentiate physicians, surgeons and apothecaries, all engaged in the practice of physic in London, two hundred only are ostensibly qualified by appropriate studies and examinations. The two hundred who only are ostensibly qualified to practise by appropriate studies and examinations, are the licentiate physicians.'"—*Lancet*, Dec. 28, p. 531.

The forged quotation, which was copied—of course inadvertently—into the Observer, Chronicle, and Post, is accompanied, in the Lancet, by an address to general practitioners against this journal. "Mark this language, (says he) surgeons and apothecaries of this metropolis! You are here denounced to the public, by this reptile of a writer, as incapable of discharging the duties of your profession." Now we, too, appeal to the general practitioners both of the metropolis and all England—and we ask who is the "reptile" that slanders you?—he who treats you as if you were fools and knaves, or he who treats you as men of education, intelligence, and morality? The Editor of the Lancet assumes that you are either fools or knaves—fools to be imposed upon by literary swindling so gross and palpable as his, or knaves to approve of trickery, falsehood, and forgery. Look at the above, and answer us: is it not supposing you are little better than imbecile, to imagine that the expressions of a correspondent of the Gazette can be palmed off upon you as editorial? and is it not an insult to you, on the part of the Lancet, to represent that arguments *in your favour*, and against the College of Physicians, had been adduced *against your interests*, and in favour of that College? Is it not assuming you to be knaves, to think that you can be pleased with the grossest perversion of all truth —with being told that we are conservatives in the worst sense of that word, and opposed to all reform;—we who are striving with all our might against the monopolies of the Corporate bodies;—we who contend that the path to the highest places should be open to all, and the prospect of attaining them held out to all as an object of their ambition? Is this being anti-reformers? Is this being illiberal? Is this being desirous of trampling on your rights? Is this denouncing you "as incapable of discharging the duties of your profession?" If not, why then are we accused of all this? We will tell you in a word: the Lancet *hates and fears us*; many now buy the Gazette who formerly bought his journal; — in this consists the whole secret! Wakley instituted a thing of his own, which he called a College; we denounced it from the beginning, and thus prevented it from succeeding! An attempt, supported by ignorant and hot-headed men, is now made to get it up under a new name. The "One Faculty," as explained in the Lancet, is but the ghost of the Collegium Wakleyanum! Let it not for shame be said that you suffered yourselves to be bamboozled by a cozening knave, who treats you as if he thought you capable of believing any thing. We put the means of judging before you: we tell you the passage alluded to in the Lancet, as by the Editor of this journal, was not editorial; and that, instead of arguing in favour of the College of Physicians, it was arguing against the College of Physicians: all this you will find to be the fact, by referring to the Gazette of December 21st. As to the rest, you have only to compare the passage above given from the Gazette with the forgery from the Lancet—you can see that they are totally different; and you can also see that making a false quotation was the act of a dishonest man, and that his object was to impose upon you. If you wish to be deceived, and become the dupes of an adventurer, who looks upon you as his prey—read the Lancet, and believe it; if not, open your eyes to its true character. WE APPEAL TO YOU AS CONFIDENTLY AS WAKLEY CAN DO;—WE ONLY ASK YOU TO HEAR BOTH SIDES, AND JUDGE BETWEEN US.

A "SENATOR"—MORE "CONSISTENCY"—AND THE "BALLOT."

THE members of the Westminster Medical Society are this evening to be called

upon to decide, whether the ballot, announced one evening, taken the next, and confirmed on the third—all without opposition—was, or was not, any ballot at all. The motion for this wise purpose is to be made by Dr. Epps, one of the "provisional senators" (there is nothing like a sounding epithet that fills the mouth)—"provisional senators" of Wakley's College; and it is to be seconded by Dr. James Johnson, who attended when the ballot was taken—who himself, not expecting to be beaten, actually voted—and thus recognized the legality of the measure, which now, finding himself in the minority, he attempts to nullify. Commend us to consistency, say we! We understand that, in the event of Dr. Epps and Dr. Johnson carrying their motion, it is intended to follow it up by a vote, to determine on the expulsion or non-expulsion of the late Mr. James Lambert.

By the way, it is amusing to observe Wakley's sudden horror of the ballot. Does he imagine, because the public did not affect his Sunday "Ballot," and let it expire of inanition, that the very word is to be abhorred, and the practice of balloting put down? In all such cases as the present, we advise the members of the Society to insist upon a ballot, as they may then vote as they feel disposed, without the possibility of being made the subjects of Mr. Wakley's infamous system of intimidation. As to the result of the vote making the slightest difference on the ulterior arrangements, *that* is quite out of the question; but it were just as well for the character of the Society that it should not voluntarily and deliberately stultify itself.

FRENCH MEDICAL NEWS.

M. Boulay, a *pharmacien*, has been appointed President of the Académie de Médecine for the ensuing year. M. Orfila declined being a candidate (though next in rotation), on the plea of his occupations as Dean of the Faculty.

The vacancy left by M. Boyer in the Académie des Sciences will be contested by M. Breschet and M. Roux—physiology *versus* surgery. It will be remembered that M. Breschet was a principal competitor on a former occasion, when M. Double was successful.

The chair of Delpech *(clinique chirurgicale)*, at Montpelier, has not yet been disposed of. The concours for it was to have taken place on the 15th ult., but it has been postponed, owing to some formality, for two months longer. There are several candidates in the field.

M. Broussais made rather a curious assertion (curious as coming from him), in his last opening lecture. He pronounced all *theories* in medicine to be mere chimeras, and that *facts* alone were worthy of attention. But the dogmas of M. Broussais, uttered from his professorial chair, have no longer the force they had ten years ago, when they came from the Val-de-Grace.

THE LATE BARON BOYER*.

Alexis Boyer was born on the first of March, 1757, at Uzerches, in the Limousin. His parents were in very humble circumstances—sufficiently so, at least, to afford a strong contrast between an origin so plain and a career so distinguished; and it would no doubt be highly interesting to trace the particulars of the early life of one who had to contend with difficulties like those which must have lain in his path, and which he so successfully overcame. But, unfortunately, M. Boyer was not fond of speaking of himself, and we are left to gather the history of his life from the series of his labours.

It is certain that he was not originally destined for the medical profession; he past the first years of his youth at the business of a notary. We know not the motives of the change, but we find him presently apprenticed to a country surgeon. In no long time he came to Paris, greedy for science, but very light in his purse; when he arrived in the capital he had no more than six louis-d'ors in the world, and he was nineteen years of age.

Desault was at this time laying the

* Abridged from the Gazette Médicale.

foundation of his subsequent fame, by his much-admired courses of anatomy. Boyer was one of his most diligent pupils; and the teacher, who was a man of discernment, chose him to assist in the business of the lecture-room, as he afterwards made choice of Bichât to prepare his clinical lectures. At the same time Boyer attended also the College of Surgery; he was an *élève* of the practical school, and carried off many prizes by the Concours. He, with a few others of his standing, was allotted a special place in the theatre during the courses; but these select pupils were obliged to assist, and to be always ready in case a question was put to them. One day, as Louis was lecturing on physiology, Boyer, who had often heard this course before, and had it almost by heart, was listlessly looking about him, with his eyes directed to any place rather than to the chair. "Sir," said Louis to him suddenly, "what have I been saying?" Boyer, taken by surprise, had scarcely heard the last words; but guessing at them, he repeated not only what the professor had just then said, but a good deal of what was to follow. "I perceive," said Louis with a smile, "that the gentleman is a prophet; he divines what I have to say!"

Eleven years soon passed over in this way. Boyer was thirty, and he was appointed by concours *Chirurgien gagnant maîtrise* to La Charité. He now opened his own courses of anatomy and physiology, and began to amass the materials of his *Traité d'Anatomie*. Nor did he neglect surgery. He wrote, for the last prize offered by the Academy, a memoir "On the best form of needles for the reunion of wounds, and the ligature of vessels;" but the Academy was broken up before the prize was adjudged: the paper has been published in the Transactions of the Society of Emulation. He was also a contributor to the journals of Fourcroy and of Desault; and among the articles from his pen about this time were, the memoir on Amputation of the Penis, on a New Method of Introducing the Œsophagean Sound, &c.

The revolution, which produced such sweeping changes in all the old institutions of France, did not pass by Boyer without altering in some degree his circumstances. The place he held in La Charité was abolished; La Charité itself became L'Unité; and Boyer, instead of his former post, had now only the title of *Chirurgien-adjoint*; but upon the creation of the Ecole de Santé, he was appointed conjoint professor of operative medicine, and subsequently obtained the chair of *Clinique externe*.

About this period (1797-99) was published his *Traité d'Anatomie*, in four volumes, a work which reached its fourth edition in 1820. Circumstances were now favourable for the progress of education; the courses and clinical lectures of the school were attended by large and studious classes; but there was still wanting for those practitioners who had gone into the world the means of keeping up the progress of their acquirements through the only mode suited for the purpose—professional journals. The revolution, which had done good service to the political press, had struck a mortal blow on the medical periodicals. Desault's journal died with him; Fourcroy's no longer appeared; and the old Journal de Médecine, begun in 1754, had perished in year 2, of the new æra. It was revived, however, under the auspices of Corvisart, Leroux, and Boyer; and this was the journal which, in 1818, changed its title to that of the *Nouveau Journal de Médecine*, and is at present known by the appellation of the *Archives Générales*. Boyer did not do much for it, except at the commencement; he was soon too much occupied with his professional avocations, and particularly with his lectures on the Diseases of the Bones, which now form volumes iii. and iv. of his *Traité des Maladies Chirurgicales*.

Boyer was surgeon to the First Consul; he was afterwards appointed first surgeon to the Emperor, and accompanied his illustrious patient in the campaigns of the first war of Poland, which were terminated by the treaty of Tilsit. This was the only occasion on which the Professor served from home—if we except his journey into Spain, whither he went to operate on the Duke of Albufera for an anal fistula. It was probably after the Polish campaign that he was created a Baron of the Empire; but he never adopted the title, and only smiled when the patients in the hospital wished to pay their court to him by greeting him with it.

At the restoration he was appointed surgeon to the king; and was so much in favour, that he was consulted confidentially by the government in 1817, regarding a project of re-organizing the

medical profession in France. The paper which he drew up on the subject was recently laid before the Academy by M. Double. Besides several articles contributed to the Dictionnaire des Sciences Médicales, M. Boyer now found leisure to compose his *Traité des Maladies Chirurgicales*, a work which, though running to eleven volumes, has had such success as to secure the sale of four editions.

In the year 1825, upon the death of Deschamps, M. Boyer succeeded both to the chief surgeoncy of La Charité and to the vacant chair in the Institute,—which may be considered as the highest point attainable by the ambition of a medical man in France. He was at this time in his 68th year, a good deal broken up by the labours of his preceding life. He latterly lost much of that vivacity which had been peculiar to him: he grew corpulent, and never went abroad except in his carriage—a circumstance which contributed visibly to enfeeble him in the progress of the disorder of which he died. This was nephritis, which racked him occasionally with pain. During one of these violent paroxysms, no less than 90 leeches were applied to him at his own request; but he was unable to sustain so great a loss of blood: he died in the course of two days, on the 18th of November, 1833, in a state of general collapse. His last wishes were impressed with that modesty and love of simplicity which characterized his whole life. He requested that no discourse should be pronounced over his tomb by the deputations of those learned bodies of which he was a member: and his desire was religiously complied with.

M. Boyer has left one son, M. P. Boyer, an *agrégé* of the faculty, and surgeon to the Hôpital des Vénériens; and a daughter, who is the wife of M. Roux, of La Charité.

ROYAL SOCIETY.

On the supposed Powers of Suction of the Common Leech. By THOS. A. KNIGHT, Esq.

FROM observing the feebleness of the muscular force exhibited by the leech in its progressive movements through the water, the author was led to doubt its possessing the powers of suction that are so universally ascribed to it. A fact, which came under his notice above sixty years ago, of considerable loss of blood from the leg following the bite of a vigorous leech, suggested to him the idea that the animal might become filled with blood simply by the injection of its body, in consequence of the impetus with which the blood is made to flow into it from the part bitten;—an impetus which he imagines may be occasioned by the introduction of a peculiar kind of venom. He considers the irritation which often accompanies the bite of a leech as corroborating this hypothesis: he admits, however, that the inflammation excited by the sting of a bee or a wasp is attended with effects of a totally opposite kind; for, in that case, the blood, instead of having a tendency to flow, stagnates around the point where the poison has been instilled.

GUY'S HOSPITAL—SLANDERS OF THE LANCET.

To the Editor of the Medical Gazette.

SIR,

THE Editor of the Lancet not having inserted the following letter, I venture to send it to you for insertion.

Your obedient servant,

A GUY'S PUPIL.

Dec. 28, 1833.

[The following is the letter addressed to the Editor of the Lancet; and though seldom choosing to interfere in such matters, yet having perused the attack and defence to which it refers, we must say that a more malignant slander, or more shuffling attempt to justify it, we never perused. We therefore give insertion to the just expressions of indignation with which the "Pupil of Guy's" throws back his calumnies on his dastardly opponent.—ED. GAZ.]

To the Editor of the Lancet.

SIR,

YOUR informer has told you a falsehood—my object is to tell you the truth. The one perhaps may not serve your purpose so well as the other, and you will therefore probably not insert this communication.

The length of time he has been engaged in scraping together instances of casual failing in the medical officers of Guy's Hospital, to gratify the feelings of your supporters, has enabled him, in his capacity of spy and informer, to give you four opportunities of slandering these gentlemen. With only one of these have I to do.

You state that Mr. Key "elandestinely" performed an operation of some importanee, with "only his favourite pupils" present. The following are the circumstances, which your purveyor doubtless knows as well as myself.

A little girl was admitted into the hospital with stone in the bladder. The surgeon (Mr. Key), desirous to avoid, if possible, the employment of the knife, found, after several trials, that he could not remove it by other means, on aecount of its size; and was therefore compelled to have reeourse to lithotomy. Being also unwilling to leave her in the pitiable plight so often witnessed after the usual mode of operating on females, he determined on the high operation. This was publiely known, beeause publiely stated, to all the pupils about the hospital; and the day for the operation was fixed. It being, however, stated to him, that on that day the pupils were engaged, and would be prevented from seeing the operation, he eonsented to defer the operation till the following day (Wednesday), as it eould be postponed without saerificing either the feelings or the safety of the patient. The notice of the operation, and of the day, was affixed as usual on the public boards of the hospital. The "favourite pupils" consisted of the whole elass attending the summer praetiee of the hospital.

Your informer has failed, as indeed might be expected, to eommunieate the sueeessful issue of the operation, knowing that the suppression of any faet at all ereditable to the offieers of Guy's Hospital is as aeeeptable to you as a positive falsehood.

I do not send you this letter in order to put your readers generally in possession of the truth—of that they are equally regardless as yourself:—you provide the polluted banquet, and they devour it;—but an honest man may happen to look into your pages, and believe what he reads. To such a one I address myself; and should you refuse insertion to this note, I shall forthwith send it to the Editor of the Medical Gazette, whose readers are gentlemen, and whose objeet is to eneourage truth—not defamation.

Your very humble servant,
A Pupil of Guy's.

Dec. 22, 1833.

NOTE FROM DR. GRANT.

To the Editor of the Medical Gazette.

Sir,

In the Medieal Gazette of the 21st instant, I observe an announcement of a work by me on Comparative Anatomy, illustrated by engravings, as about to appear.

I beg leave to state, that that announcement is made without my authority, and that I have no immediate prospect of commanding leisure for the publieation of sueh a work.—I remain, sir,

Yours, &e.
R. E. Grant.

10, Seymour Place, North,
Dec. 31, 1833.

[The announeement alluded to was eopied from another journal.—Ed. Gaz.]

NEW MEDICAL WORKS.

The Dublin Journal of Medieal and Chemieal Seienee, No. 12. 8vo. 3s. 6d. sd.

The Edinburgh Medical Journal, No. 118. 8vo. 6s. sd.

An Introduetion to the Study and Praetiee of Medieine. By John Dowson, M.D. 12mo. 4s. 6d. sd.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Dec.* 31, 1833.

Abscess	1	Hooping-Cough	4
Age and Debility	24	Inflammation	27
Apoplexy	8	Bowels & Stomach	3
Asthma	9	Brain	2
Cancer	1	Lungs and Pleura	8
Childbirth	5	Insanity	2
Consumption	62	Liver, diseased	2
Convulsions	31	Measles	24
Dentition or Teething	4	Miscarriage	1
Dropsy	13	Mortification	1
Dropsy on the Brain	10	Paralysis	2
Dropsy on the Chest	3	Rheumatism	1
Fever	6	Small-Pox	10
Fever, Scarlet	8	Spasms	2
Gout	1		
Heart, diseased	1	Stillborn	9

Decrease of Burials, as compared with the preceding week . . . 101

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Dec. 1833.	Thermometer.		Barometer.	
Thursday . 26	from 34	to 50	30·06	to 29·93
Friday . . 27	39	50	29·85	29·69
Saturday . 28	40	47	29·70	29·82
Sunday . . 29	36	45	29·86	29·76
Monday . . 30	38	52	29·63	29·60
Tuesday . . 31	45	54	29·58	29·56
Jan. 1834.				
Wednesday 1	36	47	29·72	29·89

Prevailing wind, S.W.

Except the 29th ult. and 1st inst. generally cloudy, with frequent heavy rain.

Rain fallen, ·55 of an inch.

Charles Henry Adams.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 11, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XIV.

GENERATION.

Time occupied in the transit of the ovum through the fallopian tube.—Although impregnation is consequent *immediately* upon a successful copulation, the product of conception is not apparent for many days: some time elapsing before the newly-formed being gains the uterine cavity. It is by no means, indeed, accurately determined how long the impregnated ovum occupies in its transit through the fallopian tube; and I am inclined myself to the opinion that the period is not definite, but varies in every instance, and is extended over a considerable range. It is generally supposed, that in the human subject at least seventeen or twenty days elapse between the moment at which conception occurred and its lodgment within the womb; and this opinion seems to be borne out both by human dissections and observations on the lower animals. A very accurate description is given by Mr. Ogle—in the second volume of the Transactions of a Society for the Promotion of Medical and Surgical Knowledge—of a dissection performed by John Hunter, on the body of a woman who was supposed to have been impregnated nearly a month before. In this instance, no ovum could be found either in the tubes or uterus. Professor Burns says he has examined very carefully the uteri of three women within the first month after impregnation, and has not been able to discover either ovum or fœtus. Haller and Vallisnieri state, they were never able to detect the ovum distinctly in the uterus before the seventeenth day; and Blumenbach supposes it does not begin to be formed until the second week after conception; and he doubts whether, before this time, any vestige of human impregnation has ever been visible.

In opposition to these high authorities, we have a very valuable and well-known case, published in the Philosophical Transactions for 1817, of the dissection of a woman who died on the eighth day after connexion, and in whose uterus an ovum was discovered. The examination was conducted by Sir Everard Home. He minutely describes the appearances, and gives a magnified drawing of the ovum. He says it bore a fair proportion to that represented by Mr. Hunter as one of three weeks after conception. It consisted of two membranes, with the edges turned inwards, like a shell of the genus *voluta*; and contained (besides a slimy fluid) two globules, which might be separated by pressure, but which quickly resumed their situation, and were probably the rudiments of the heart and brain. Sir Everard was assisted by Mr. Bauer, and employed a strong magnifying power.

If we reason by analogy on the subject of human conception, we shall be inclined to think that the ovum is at least three weeks after impregnation has taken place before it enters the uterine cavity; for in the rabbit, whose period of gestation is thirty days, the ovum is not found in the uterus until the fourth day, according to Cruickshanks, and the sixth day according to Haighton: and in the sheep, in whom gestation occupies five months, Haller found that it does not descend into the uterus until the seventeeth day. Thus, then, in the human female, whose term of gestation is nine months, we might expect that more than seventeen days would elapse

before the uterus received the product of conception into its cavity.

Changes in the uterus during the transit of the ovum.—During this transit of the ovum through the fallopian tube, the uterus (if we may use the expression) does not remain an inattentive, idle spectator of what is going forward, but is busying itself in preparing for the reception of its expected guest: it is perceived, therefore, to undergo some changes. A slight increase in its general bulk takes place; an enlargement also in the size of its vessels, which admit an increased quantity of blood to circulate through its substance; and a viscid mucus is secreted in its cavity, which is afterwards to become the deciduous membrane, and which is the first medium of connexion between the mother and the ovum. The glands situated in its neck and mouth, which before could scarcely be discerned, are now very evident, and strongly marked. They take upon themselves a new action, and pour out a considerable quantity of tough gelatine; completely plugging up the os uteri, and preventing the passage of any fluid substance from the vagina into the uterine cavity.

Changes in the ovarium.—Changes also are observed in that ovarium from which the vesicle has proceeded: it is more vascular than the other, and a cavity may be seen in some part of its structure whence the ovum has escaped, filled with coagulated blood; which in time becomes organized, is consolidated into a part of the ovarium itself, and forms the substance previously noticed under the name of *corpus luteum*. I have before mentioned that the corpus luteum is no longer looked upon as a certain test of impregnation: if, therefore, we should be called upon judicially, for an opinion whether a particular female had been lately impregnated, we are not justified in giving an affirmative answer merely because the ovary contains a recent corpus luteum; although if, after a minute search, we could not discover one, nor any other strong evidences of conception, we might, I think, be tolerably certain that the woman had not been lately gravid.

Changes in the fallopian tube.—The fallopian tube of that side corresponding with the altered ovarium, is much more vascular than the other—almost, indeed, turgid: and these four circumstances combined—the slightly enlarged uterus containing within its cavity a viscid mucus—the peculiar secretion at its neck and mouth—the corpus luteum in the vascular ovarium—and the turgid state of the fallopian tube—will together afford us strong presumptive proof of a recent conception, although we may not be able to detect an ovum.

In cases of plural conception, a corpus luteum will be found corresponding to each ovum; the rudiments of which may all have proceeded from one ovarium, or have been furnished by both.

The ovum, during its passage through the tube, is not attached to the mother by vessels.—During the passage of the ovum through the fallopian tube, whatever length of time is occupied, it is not attached to the mother by vascular connexion: for if it were to become connected by vessels, a species of the disease termed *extra uterine conception*, would be produced. Presuming, then, that it derives no nourishment from the mother until it has become settled in the uterus, and a reciprocal vascular communication commences between the two systems, we cannot suppose that it grows during its transit. I am decidedly of opinion that it does not increase at all while in the tube; but that it would be as small at the end of twenty days, when it arrives at the uterine cavity, as it was at the end of twenty minutes after conception had taken place. It might be asked, how life could be continued to the new being, if it were perfectly unconnected to the parent? There is no difficulty in solving this question. Life is continued to it in consequence of the principle which was implanted in it at the moment of impregnation. We have instances constantly before our eyes, perfectly analogous. It is well known that eggs will retain their vitality for many weeks, and even months: they have even been said to have visited the antipodes, and been hatched after their return. It is the possession of the principle of vitality which preserves them from putrefaction, as is strongly instanced in the case of their being frozen: their vitality is destroyed by subjecting them to a low temperature, and putrefaction commences immediately. There is no greater difficulty in solving the one question—how life is continued to the ovum in the fallopian tube, than the other—how vitality is preserved for so long a period to the egg. How long will not a seed retain the principle of life! Horticulturists tell us that the longer some seeds are kept, the finer will be the plant produced. Thus it is well known that gardeners keep melon seeds for many years. Ray, the naturalist, says, "some of the ancients mention seeds which retained their vitality for forty years; and I have found that melon seeds, after thirty years, are the best for raising melons."

Signs of conception.—The signs of a woman having conceived, are not always so strongly marked as to warrant us in giving a positive opinion on that point. The question whether impregnation has taken place, is one of the most delicate that can come before a medical man in the common course of practice; not only in regard to

unmarried females, but also when the subject is a married woman;—and it is one most difficult to be solved. The symptoms may be divided into two classes—the *local*, and more *general*.

Local symptoms.—The local symptoms are the following: first the cessation of the menses. This usually occurs immediately on conception taking place. If a woman become impregnated but a few hours before she expected the return of menstruation, by the *regular* law of nature, the discharge would be suspended. But this is not to be understood as an universal observation, or free from numerous exceptions; for I have already mentioned that most physiologists of the present day concur in the opinion that the menses may be secreted for one or two periods after the woman has conceived: in which case, however, the discharge is usually scanty in quantity, and is supposed to proceed only from the neck of the uterus, which, previously to the sixth month, does not begin to expand. The cessation of the menses is the most strongly marked of any of the symptoms, local or general;—it is that which makes the most forcible impression on the patient's mind, and first calls her attention to her situation.

Another local sign is the enlargement of the breasts. This does not occur immediately after impregnation, certainly not for some days, or perhaps weeks. There is fulness, an increase of hardness, and some little shooting pain experienced, particularly on pressure. This enlargement is consequent on the increased quantity of blood determined to the organ, through remote sympathy with the uterus. Together with enlargement of the mamma, we observe an increased vascularity in the areola around the nipple; it becomes of a more florid colour, and of greater extent: the sebaceous follicles which it contains are more prominent and harder, and from them a small quantity of viscid secretion may be squeezed. This change is particularly observable in first pregnancies; for after a woman has borne a number of children, the areola becomes of a dusky brown colour, it is spread wider in extent; and the alterations which take place in consequence of increased vascularity, are less evident to the eye. There is no *single* external symptom, perhaps, of all that can be mentioned, which is so much to be relied upon as the peculiar appearance of the areola around the nipple, provided it be a first pregnancy. A third symptom is the secretion of a milky fluid in the breast, which is formed in larger or smaller quantities even from an early stage of gestation. This is by no means an universal symptom; nor would I call it general, but it frequently accompanies pregnancy.

General symptoms.—The most prominent of the general symptoms are nausea and vomiting: an attack of vomiting occurs mostly in the morning, as soon as the patient rises out of bed. It is supposed to be the consequence of the change from the horizontal to the upright posture, and has for its remote cause the sympathy existing between the uterus and the stomach, through which they mutually affect each other. It is denominated *morning sickness*. It generally goes off before noon; at other times it remains very distressing throughout the whole day: it usually also disappears after quickening; in other cases it will annoy the patient excessively during the whole term of gestation, preventing her retaining the whole of any meal on her stomach, and causing great weakness and emaciation, from the insufficiency of nourishment digested. The appetite often becomes depraved; articles of nourishment formerly relished are now loathed; and improper food, or delicacies very difficult to be procured, are desired. Acidity is frequently generated in the stomach; and its consequences, heartburn and deranged digestion, accompany it. Occasionally the most distressing symptoms of irregular hysteria are observed, and often an unnatural irritability of temper, which demands our sympathy rather than our censure. As gestation advances, the fat is gradually absorbed from the face, giving a peculiar sharpness to the features, and an unpleasant prominence to the bones and muscles; so that a woman will often appear much older when pregnant than at any other time. Other anomalous symptoms are common, which it is almost impossible to particularize; such are salivation without any ulceration of the gums; violent toothache, unconnected with caries; neuralgic pains in the head and limbs; and many more.

After a time the patient's abdomen will evidently enlarge, and her increase will be apparent — partly in proportion to her height—partly the size of her pelvis—and partly the quantity of fat contained in the abdominal parietes: and she will be made sensible of the life of her offspring, by feeling its movements. These symptoms, however, although numerous, are by no means positive—they are only valuable in conjunction; when taken singly, or individually, they possess but little weight. Even that which we should imagine almost infallible—the sensation communicated to the hand by the irregularity of the fœtal limbs, and its motions—is far from being free from deception. Spasmodic contractions of the abdominal muscles will often closely simulate this feeling, which cause of embarrassment I have myself experienced.

Other means, then, besides a mere history of symptoms and manual examina-

tion of the uterine tumor, are often required for arriving at a correct diagnosis;—these consist in an internal examination of the uterus per vaginam; and the application of the ear, either aided by the stethoscope or not, to the patient's abdomen. The former of these modes has been long employed; the latter only recently.

In the examination per vaginam there are many points which must be carefully attended to; particularly the size and weight of the uterus; its situation in the pelvis; and the state of its mouth and neck. As gestation advances, and the womb enlarges, its increased size can usually be detected by the finger introduced into the vagina, and carried up towards the cervix, beyond the os uteri. By balancing it on the extremity of the finger, its augmented weight will also be evident; and this examination is the more easily effected, since the uterus, in the earlier months of pregnancy, sinks lower in the pelvis towards the os externum, than the situation it occupies in its virgin state. These means of diagnosis are strongly insisted on by the French writers, under the term "ballottement:" but it must be immediately evident that they are liable to much fallacy, since many causes may augment the bulk of the uterus independently of pregnancy; and with its increase in size there will necessarily be also an increase of weight, and some degree of subsidence.

The changes which the os uteri has undergone will afford us a better guide; its labia are enlarged, rather spread, softer, and more irregular, than in the unimpregnated state, and not tender; its orifice more capacious, but closed, and plugged with the gelatinous fluid just mentioned. Under no disease with which I am acquainted does the mouth of the womb take upon itself a change such as it undergoes in pregnancy; still much tact is required to discriminate the peculiarities of the gravid os uteri, and this is only learned by practice. The internal examination, however, is the means I myself most particularly rely upon to solve doubtful cases, and is of all others the most satisfactory which I have attempted.

With regard to auscultation, I confess that I have not yet been able to acquire that nicety of ear requisite for its employment as a means of diagnosis. Although, however, in those cases where I have attempted it, I have not succeeded in making myself sensible of the sounds described, this will by no means induce me to discard the stethescope, or pronounce it useless and unavailable; it will rather stimulate me to increased diligence. The respectable authorities by which it comes recommended to the profession, at least deserve that their facts should be relied on, and their opinions not lightly regarded.

To Maior, of Geneva, we are indebted for the first hint respecting auscultation as a means of distinguishing pregnancy. He detected the fœtal heart beating through the abdominal parietes; but it does not appear that he extended his observations, or that he was aware of the valuable use which might possibly result from the discovery.

Kergaradec—who seems not to have heard of Maior's previous discovery—accidentally became acquainted with the same fact. He prosecuted his enquiries; and in 1822 published, in Paris, a "memoire" on the subject. He describes,—what has since been fully corroborated,—the existence of two sounds;—the one of pulsation produced by the action of the fœtal heart;—the other a *souffle*,—the result of the uterine circulation; and more evident at the point of placental attachment.

Our brethren in Dublin have followed up these observations with praiseworthy assiduity, and we have already some papers on the subject by Drs. Ferguson and Nagle, and a work but just issued from the press, by Dr. Kennedy. All these physicians speak highly of auscultation in pregnancy. The latter states that he has sometimes been able to detect the peculiar sounds even before the termination of the fourth month; and gives us some striking cases where the stethescope dissipated all previous doubts. Dr. Ferguson considers these sounds as the only unequivocal evidence of pregnancy. He states that he has always, except in one instance, been able to detect the pulsation of the fœtal heart after the fifth month, and generally before that period; and he has seldom found it necessary to remove any part of the dress to conduct the examination. Dr. Nagle has given us two cases, in which he was able to discover twins in utero by detecting the fœtal pulsation at different parts of the organ; and both the latter named gentleman, as well as Dr. Kennedy, would lead us to infer that the respectable name of Dr. Collins is ranked among the converts to the value of auscultation as a means of diagnosis in doubtful pregnancy.

It is impossible to refuse credence to such testimony; and I have little doubt that we shall most of us soon be as familiar with the placental *souffle*, as with any of the thoracic sounds. If the stethoscope really possess the great advantages attributed to it, it will become a most useful practical instrument in another point of view—to determine under labour whether the child be living or dead; a point which we shall hereafter find it is of the utmost importance to clear up, as in instrumental

cases such knowledge would greatly influence our practice.

Signs immediately following conception.—Many symptoms have been enumerated as proofs that a particular connexion has been fruitful, which are said to occur at the moment of conception, or immediately after; but they are none of them to be relied upon;—such as excessive languor seizing the frame immediately after intercourse, or a sudden rigor or tremor occurring. An increased degree of sexual feeling experienced by the woman has also been added to the signs; but this is certainly no proof; for it is well known that many women conceive without partaking in any voluptuous sensations. Thus Dr. Elliotson, in a note to his Translation of Blumenbach, observes, that the mother of one of Napoleon's generals, as well as other children, told a friend of his, "qu'elle n'avoit eu que les douleurs d'enfanter;" and the late Dr. Heberden has the following passage, "Duo mariti mihi narrarunt uxores suas in venere fuisse frigidas, omni ejus cupiditate et voluptate carentes; sæpè tamen gravidas factas fuisse et rectè peperisse;" and many cases are on record in which conception has occurred under the stupor of alcohol and opium. These cases entirely refute the opinion of Foderè, who supposes impregnation incompatible with the absence of enjoyment under the embraces of the male.

Period at which conception most frequently occurs.—Women are said to be more liable to impregnation immediately after menstruation than at any other period of the interval; but it is very doubtful how far this supposition is correct. The tables published by my friend, Dr. Merriman, indeed, would establish that women become pregnant more frequently just before menstruation ought to occur, than immediately after its cessation. It is an undecided point, whether a woman could conceive during the period that the menses are flowing; I am inclined to doubt the probability. The uterus being at that time employed in the discharge of one function, I think it very unlikely that that function would be suddenly suspended, and that it would at once take upon itself another;—still, I will not say it is impossible.

Progressive increase of the ovum.—When the ovum is first detected, it contains no embryo visible to the naked eye. It appears to consist merely of a pellucid membrane, inclosing a quantity of transparent serous fluid. Here are two specimens [presenting them] in which I have never been able to detect an embryo.

When the embryo is first seen, it appears like two oval bodies joined by a kind of neck, of which the largest is the head: but it is impossible, without very minute inquiry, to distinguish this organ from the trunk; because we can neither discern features nor the rudiments of limbs. After the first month, the head relatively diminishes in size. At the end of five weeks, the formation of the umbilical cord commences; the abdomen of the embryo appearing attached to the amnios. About the end of the sixth week, the umbilical cord is distinctly formed; the vessels then run in straight parallel lines; and are not observed to twist around each other till about the tenth. When eight weeks are completed, we may distinctly perceive the extremities sprouting like the buds of a plant, but we cannot distinguish the legs from the arms by their form alone; we only know them by their situation. Here [presenting a preparation] is an ovum of seven weeks, where the limbs are just budding. Here is another of eight weeks, where you cannot distinguish the legs from the arms except by their situation.

Between the eighth and twelfth weeks the fingers and toes are observed to be joined together, as it were, by a web. After

An embryo of about ten weeks old.

twelve weeks have passed the legs and arms are formed in miniature, and the fingers and toes are distinct and separated from each other; it is then about three inches

An embryo of twelve weeks old. These three representations are rather larger than the natural size, being somewhat magnified by the spirit in which they swim.

long. At the end of the fourth month it is about five inches long; and at the end of the fifth it is six or seven. At the end of the sixth month the fœtus is well formed, and measures eight or nine inches long; it then weighs about one pound. At the end of seven months it is about twelve inches in length; at the end of eight it is fifteen, and weighs between four and five pounds. At the end of nine months—the full time—it is about twenty inches, and weighs about seven pounds. [The learned lecturer then presented several preparations illustrative of these facts.] These measurements, nevertheless, must be received with considerable latitude, as there are almost innumerable deviations and variations in the size and weight of the fœtus throughout pregnancy. We shall be better able to ascertain the age by following the evolution of the different external organs.

Evolution of the different parts.—With regard to the evolution of the features, the eyes are those first observed; the nose appears about the end of the second month; the mouth nearly at the same time, as a round hole. The lips are not formed for some weeks afterwards; and the ear is not fully formed till the fourth or fifth month. From the preparations on the table you will observe that the fœtus increases more quickly between the second and third month, relatively, than at any other period; you will see that, during these four weeks, from being almost an unformed mass of matter, consisting of two oval bodies and four budding extremities, it acquires the appearance of a man in miniature. This rapid evolution is supposed to be the reason why women more frequently abort between the eighth and twelfth weeks than at any other period of pregnancy, because there is an augmented quantity of blood determined to the uterus at that period, which increases its irritability, and predisposes it to take on expulsive action. The parts of generation are at first small, but at the end of the third month are large in regard to the size of the body.

Quickening.—At the end of four months, or four months and a half, the limbs are sufficiently evolved to permit their being moved freely, and the fœtus is able to impress a sense of motion on the mother. The first sensation of this kind which the woman experiences is called *quickening*. She describes it as though something were tapping within the uterus, like the fluttering of a bird; and often syncope accompanies the first impression. The movements of the child, if it continue to live, are felt occasionally during the remainder of pregnancy. It used formerly to be supposed, that life was first granted to the fœtus at the time of quickening; and the English law regarding fœticide, still in existence, was formed on this belief; but we now know that the ovum receives life at the moment of impregnation, and we account for the mother not having felt it before, because its muscular structure in the early months is not sufficiently evolved to produce any impression on her sensations. Some physiologists, of late, have supposed that the sensation called quickening is not produced by the first motion of the child, but by the first springing of the uterus from the pelvic into the abdominal cavity. I have no doubt that the old opinion is the correct one.

The period of quickening is very uncertain; sometimes it occurs at little more than three months; and at others it is not experienced till five or even six months have passed. The period of gestation at which quickening is perceived will depend on three circumstances. First, the acuteness of the mother's sensations. It is well known that some women are much more susceptible than others; and in proportion as the nervous system is excitable, so will she feel a slighter motion of the fœtus. Secondly, the strength of the fœtus itself; some fœtus are as large and strong at four months as others are at five or even older, so that a younger embryo, if strong and healthy, may be able to impress the mother's sensations, which a puny older fœtus could not do. Thirdly, the larger or smaller quantity of the liquor amnii: this fluid varies considerably in quantity; in some instances—even during the early

months—being very copious. The larger the quantity, then, the less likely are the fœtal movements to be felt.

We observe fat first deposited under the skin about the end of the sixth month, where previously there had been a gelatinous fluid. The nails and hair are generally about this time perfect—the eye-lids still closed—the *membrana pupillaris* still investing the pupil—and, in boys, the testicles still in the abdomen, bound down to the psoæ muscles by an extension of the peritoneum, afterwards to become the tunica albuginea. At the end of seven months it is perfectly formed; the membrana pupillaris has disappeared; the testicles have begun their descent into the scrotum; and the internal organs are sufficiently perfected to permit its enjoying an independent existence.

Instances have been known, indeed, of children, at the end of six months, living; but these are very rare. Dr. Merriman stated, on the question of Bailey's divorce bill, that he had known an infant of six months and eighteen days live to grow up, but not to become stout; and I knew one case of a child, at six months and a half, living for some weeks; but, we believe, that until seven months are perfected, the respiratory and digestive organs are not usually sufficiently developed to allow of the continuance of independent life.

At the termination of the ninth month the testicles are mostly met with in the scrotum; the eye-lashes and brows can be discovered; its length, as just stated, is about twenty inches, and the weight about seven pounds avoirdupois. The weight, however, of a mature fœtus varies exceedingly, being influenced by circumstances not very easily explained; the length, indeed, is subject to less variation. Generally speaking, males weigh more than females by one or two ounces, and are longer by a third or half an inch. Some children at full time have been known to weigh as little as five pounds; while many cases are on record where the weight was more than double the average. Thus Capuron mentions, that he has seen two children at birth which weighed twelve pounds. Boudelocque saw a few instances in which the weight was twelve, and one in which it was thirteen. Merriman delivered one which weighed thirteen pounds; it was dead. Sir Richard Croft delivered one alive weighing fifteen; my father once delivered a woman of a fœtus which weighed sixteen pounds and a half avoirdupois; and Dr. Moore, of New York, states that an instance occurred in that city, in 1821, where the fœtus, born dead, weighed also sixteen pounds and a half—the two heaviest well-authenticated cases, perhaps, on record. The two largest children I was ever myself at the birth of, weighed, the one fourteen pounds; the other twelve pounds, and one ounce. The first was a breech presentation; the patient was under my father's care, and he called me to his assistance. The last I extracted by the forceps; they were both born dead.

Modes of ascertaining the age of a fœtus.—Now, although children vary in length and in weight so much at different periods of utero-gestation, that it is impossible for us to give a correct opinion as to the age of the fœtus by merely measuring or weighing it, still there are some points, by attention to which we can generally ascertain pretty positively how far utero-gestation has advanced. Thus if an ovum be shewn us, and we cannot see any embryo distinctly visible, we should say that most likely not more than three or four weeks had elapsed from conception. If we discover an embryo, but see no appearance of limbs, as in this case [presenting a specimen], we should say that the conception was more than a month old, but not seven weeks, because then we can see distinctly the budding of the limbs, and it may therefore be about five or six weeks. If the extremities are just appearing, like the buds of a plant, we may then say it is seven or eight weeks. If we can see the fingers and toes clearly marked, but not distinct from each other, we may suppose it is more than eight weeks, and not twelve: we may take the medium, and say ten. If we can see the fingers and toes distinctly marked, we may be pretty sure that it is twelve weeks old. If the woman has quickened, we presume she has passed sixteen weeks at least, or probably nearly eighteen. In a larger fœtus we take another mode of ascertaining the age, introduced by Saussier. This is called the linear rule, and is dependent upon the comparatively large size of the head, and shortness of the legs, in a young fœtus, and the converse in a larger one; for the upper part of the body is first developed, and the lower afterwards. If a cord, then, be passed along the front of the body, from the vertex to the feet, the child being laid at length on a table:—at six months the centre of the cord will be found to be opposite to the ensiform cartilage;—at seven months it will be nearer to the ensiform cartilage than the umbilicus;—at eight months it will be nearer to the umbilicus;—and at the end of the ninth month it will be exactly opposite to the umbilicus. The presence or absence, also, of the membrana pupillaris, which begins to be absorbed when seven months have passed, will afford us some guide as to whether the fœtus has attained that age.

Variations in the proportion of the liquor

amnii to the fœtus.—We observe that, during gestation, the proportion between the fœtus and liquor amnii, in which it swims, varies much at the different periods: the water is in very large quantity comparatively in the early months, and in very small quantity in the latter months; although there is positively more water at the end of nine months than at any other time. Thus, when the fœtus does not weigh more than 20 grs., the membranes contain an ounce, or perhaps an ounce and a half, of fluid; and at full time, when the fœtus weighs 7 lbs., the fluid is generally about a pint and a half or two pints. The quantity of fluid contained in the membranes allows the fœtus free motion of its legs and arms, and at the early months it could move its whole person in every direction; but towards the end of gestation it is confined in its position so far as the body is concerned, although it has an opportunity of moving its limbs. At a particular period of pregnancy it takes a definite posture, from which it afterwards never, or very seldom varies.

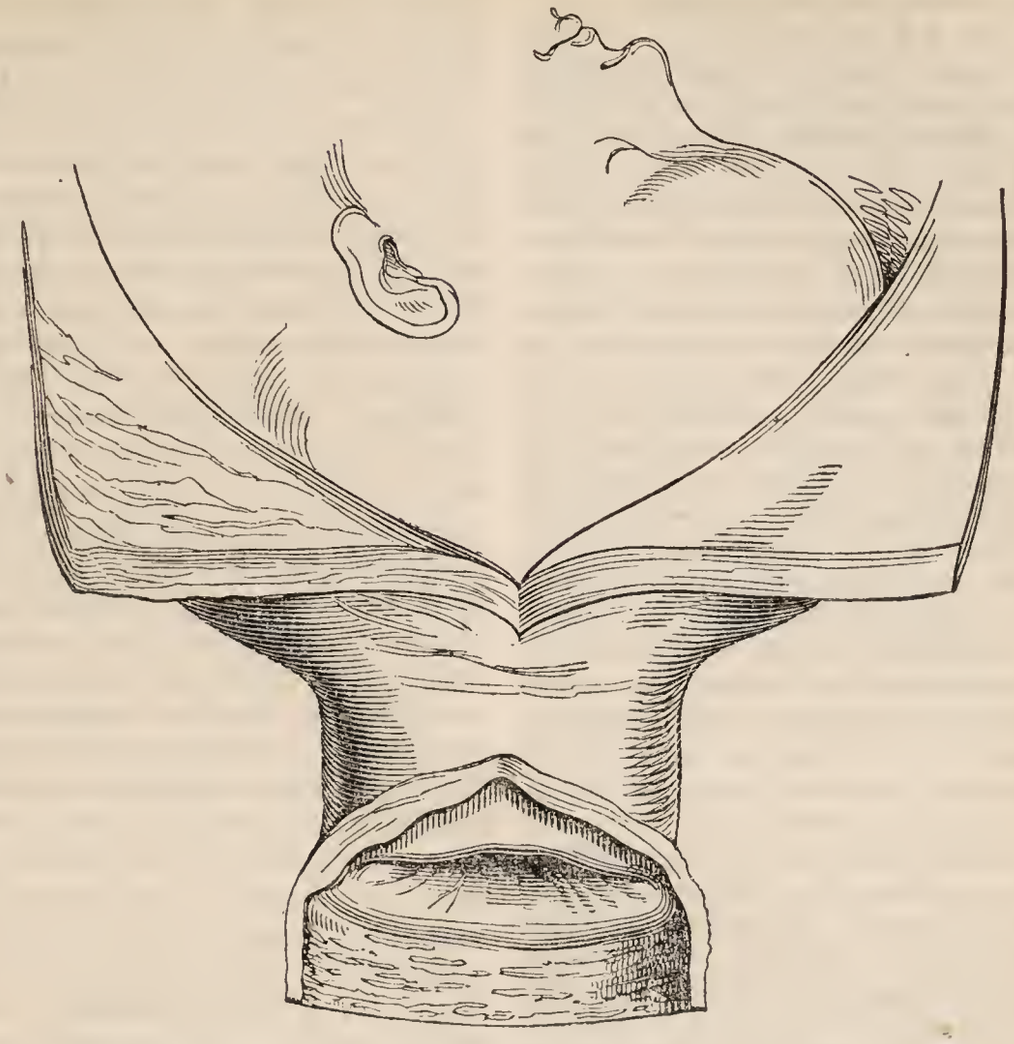
Effusion of fluid between the chorion and amnion.—In the young ovum there is almost always a quantity of water thrown out between the chorion and amnion, as this preparation shews [exhibiting it.] The large sac which is thrown open is that of the chorion; the small sac which is within is the amnion. You see what a much larger space the chorion occupies than the amnion, and there was water between them. This continues sometimes till the end of gestation: in most instances, however, this interstitial fluid disappears after two or three months.

Development of the uterus during pregnancy.—At the end of the second month of gestation, the uterus is not altered at all in shape, but it is larger and more vascular. At the end of the third month it generally measures about five inches from the fundus to its mouth. At the end of the fourth month it measures about five inches and a half; it is felt until this time lower in the pelvis, nearer to the os externum; it then begins to rise from the pelvis, and at the end of the fifth month it may be felt like a ball, about the size of an infant's head at birth, just rising above the symphisis pubis in the centre; it has now rendered the lower belly somewhat tense; it then measures about six inches in length. At the end of the 7th month its fundus has reached the navel, and it measures about eight inches. At the end of the eighth month it may be felt distinctly between the navel and ensiform cartilage. At the end of eight months and a half it has quite reached the ensiform cartilage, and it then begins to sink slowly. At the end of nine months it occupies the same situation which it did at the end of eight, and measures in length from eleven to thirteen inches. It does not increase uniformly as to size: it enlarges much more rapidly during the latter months of pregnancy, but during the earlier months it grows comparatively more considerably. Thus it is twice as large at the end of the second month of gestation as it was at the end of the first; but it is not twice as large at the end of the ninth as it was at the end of the eighth. It begins to rise into the abdomen about the sixteenth week; and in its ascent it passes before all the other abdominal viscera, generally carrying the omentum upwards with it. In its ascent it is guided principally by the broad ligaments. It seems to increase from the fundus, as that part is first developed; and the cervix and os uteri are the last which undergo expansion. The cervix begins to expand, so as to contribute to the formation of the cavity, about the end of five months. The shape of the uterus alters, then, as pregnancy advances. For the first five months it is globular, and the cervix appears as a lengthened process attached to it; at the end of the seventh month it has acquired somewhat the shape of a balloon; and at the end of nine months the shape of an egg. Here [presenting it] you have a good specimen, to shew that the cervix uteri is not developed till a late period of pregnancy.

Alteration in the Situation of the Uterine Appendages.—The fallopian tubes, broad and round ligaments and ovaries, are altered in their relative situation: the ovaries are nearer to the uterus, the broad ligaments seem to run down from the uterus instead of up. In increasing in size the uterine parieties do not become thinner, they are not stretched or distended in the same way that you would blow out a bladder; but they actually become rather thicker than in their unimpregnated state, although they lose their compactness and closeness of structure: and it is worthy of remark that the uterine cavity is never completely full. The increase of the size of the uterus does not seem to depend so much upon the deposition of any new matter, as upon the enlargement of the blood-vessels; this causes its substance to become so ductile, that it can be drawn out without tearing to some extent; yet there is decidedly a fresh formation both of fibrous and of cellular matter in some degree.

Changes in the Peritoneum.—The peritoneum covering the uterus also undergoes a great change: its surface is very much increased. This extension is produced partly by the formation of new membrane; partly by the peritoneum stretching; and partly by the duplicatures which form the

broad ligaments splitting as the uterus rises, and allowing the uterus to pass between their folds. This, we presume, takes place because the ovary on each side is



This engraving shews the unexpanded cervix uteri, between the end of the fifth and sixth month of gestation.

drawn much nearer to the uterus than in the unimpregnated state; and the round ligaments, instead of being continued along the broad ligaments, run almost perpendiculary downwards, clinging closely to the fore part of the uterus itself.

Enlargement of the Blood-Vessels. — The blood-vessels enlarge in the same proportion as the uterus increases in size, so that towards the end of gestation some of the arteries will admit a goose-quill; the veins are much larger, and have acquired the name of *sinuses*. The large size of the vessels will easily account for the dreadful hæmorrhages which we meet with towards the close of gestation, and in labour.

Period of Gestation.—The period of gestation in women is said to be forty weeks, or 280 days, about nine calendar months; but many circumstances may bring on labour before that time, and sometimes the period appears to be protracted for many days. It is a very difficult thing to learn exactly the time when a woman has conceived, and hence the diversity of opinion respecting the duration of pregnancy. According to the evidence given before a Committee of the House of Lords, relative to the Gardner Peerage in 1825, the most respectable obstetricians in London were divided in their opinions, as to the possibility of human pregnancy being prolonged. Some supposed that a woman could carry the ovum eleven months; but all the women who were brought forward to support the opinion of protracted gestation, reckoned from the time of quickening, which is always most fallacious; inasmuch as the child may impress a sense of motion on the mother as soon as its muscular structure is sufficiently evolved to allow it to move: a strong fœtus may therefore produce the impression earlier than the usual period. Independently of this irregularity, there is great liability on the part of the woman to mistake the rumbling of flatus in the bowels for the motion of her child.

I am inclined to think that the period from conception is not definite, but that the time during which the ovum remains in the uterus, is perfectly defined, and never varies; and I should explain the apparent difference in human gestation, by the various periods which elapse during the passage of the ovum through the fallopian tube. We have learned that John Hunter, and many other accurate anatomists, have never detected the ovum in the uterus under a month from impregnation; and we have an unexceptionable account of Sir Everard Home's having found one in the uterus on the eighth day. Here, then, we have a decided difference of three

weeks in the passage through the tube; and I think that may explain the apparent difference in the term of gestation.

Mode in which Females calculate the Termination of Gestation.—It only remains that I should put you in possession of the mode by which women reckon when they are likely to fall into labour. They either calculate from the interruption of the menses, or quickening, or both. Quickening is only taken as the guide in those cases where they have not the interruption of the menses to date from; as for instance, if pregnancy occurs during suckling, when the menses do not appear. If we are obliged to calculate from quickening, we consider that epoch takes place at four months and a half, or when half the period of pregnancy has passed, and we reckon four months and a half from that time. The suspension of the menses is less likely to mislead us; but as a woman may conceive immediately after their cessation, or immediately before they ought next to have appeared, it is evident that if we reckoned nine months from their last eruption, we might be twenty-six or twenty-seven days wrong in our calculation. Thus, then, we take the midspace between their last appearance and the time when they ought next to have been secreted, and calculate from that time nine months; and we shall not usually be wrong more than a fortnight at the farthest. We expect labour will come on about nine and a half months from the time of the last menstrual period.

If we have both the interruption of the menses and quickening to guide us, we calculate nine months and a half from the last menstrual period, and four months and a half from the time of quickening; and if these periods fall pretty nearly together, we shall be tolerably accurate.

Proportion of Males to Females.—From the most accurate registers it is found that the number of males born is greater than that of females, in the proportion of 100 to nearly 97.

ON DENTITION;

WITH AN

ATTEMPT TO EXHIBIT THE OCCASIONAL PRESENCE OF CERTAIN DISEASED CONDITIONS OF THE BODY,

As connected with its Irregular States.

By Dr. Ashburner.

[Continued from page 475.]

Porrigo favosa is by no means an uncommon coincident with dentition, and the local treatment of the disease is most judicious when little other interference is made than arises from cleanliness and water dressing. The disease vanishes when the teeth and jaws become settled into normal relations with each other.

Porrigo scutellata is always connected with anormal trains of growth about the teeth and jaws. The disease is catching from child to child, but seldom from a child to an adult, unless the adult have not completed the development of the full complement of the teeth. A woman, of the name of Holmes, residing at Walworth, is the "Preparer of the Vegetable Ointment," with which she readily cures this complaint in a very short space of time. The head, observed after her treatment, is covered with an uncommonly large quantity of scurf, which continues to be secreted for a long time after the head is cured. It would seem that her ointment has the property of changing the morbid porrigo scutellata into an abundant healthy secretion of the natural scurf of the head. The usual secretion of grease about the face and head is in many cases of dentition most abundantly increased—a relief, no doubt, to the cerebral irritation. The secretions about the mouth are very frequently not only increased in quantity, but occasionally much altered in properties, in certain individuals, during the development of the teeth and jaws. Children are found to slobber very much during dentition, and sometimes for months before the teeth are cut. It would seem that sucking the thumb is a provision for the exercise of the organs concerned in developing the teeth, by which a secretion is obtained that materially relieves the head. So important is secretion to the relief of the head, that some children are found with a sneezing, and abundantly secreting catarrh, with every tooth they cut. Persons subject to habitual catarrh, are cured by affording relief to cerebral irritation, by inducing the skin and mucous surfaces of the bowels to secretion. A solution of small quantities of the sulphates of potass, soda, and magnesia, taken daily, in the morning, with occasional small doses of the oxide of mercury, ipecacuan, and James's powder, at night, sponging the surface with warm vinegar, and rubbing, are good measures for persons subject to catarrh, as well as for those who are anormally developing teeth and jaws. These are, indeed, the very persons who are most liable to catch colds, and, for

the most part, they take cold heavily. If they attend pointedly to their bowels, to ensure daily good evacuations, of healthy colour and quality, they avoid their proneness to such an inconvenient complaint.

Porrigo larvalis sometimes is cured during the progress of dentition, leaving an unseemly and troublesome puckering about the mouth and cheeks. Most often this unpleasant state is continued until the teeth and jaws have established a harmony with each other. A question has often been asked of me, relating to my treatment of porrigo scutellata, and other eruptions about the head, coincident with anormalities of dentition—how do you proceed to cure them? The only local application necessary after the hair has been removed, is the water-dressing recommended by Professor Macartney: clean lint, soaked in water at 98° Fah. applied to the head, with a skull-cap of oiled silk, or of India rubber camlet, to prevent evaporation; great cleanliness should be observed; the bowels should be regulated by mercurial doses. Regarding the mouth, the question is, what anormal condition is present? Perhaps deciduous teeth, which ought to have fallen out, are persistent: perhaps their fangs are not being absorbed with sufficient rapidity, and consequently the evolution of the jaw is not so complete as it should be. If the deciduous teeth be in fault, they should be removed. If coming teeth have hardened gums in their way, or from other causes, require liberation, the gum-lancet should be used freely. No particular rules can be given about the employment of this instrument which are not found in the books on dental surgery. The general principles which ought to regulate us in its use are very simple. I believe it should be used whenever we have good reason to believe that an unloading of vessels about the capsule of the coming tooth is indicated;—whenever the coming tooth is obstructed by a hard, a thick, or a difficultly-absorbable gum;—whenever, from an ample space being present, the tooth has abundant room to develop itself, yet remains deep in the gum, and is attended by convulsions or other serious symptoms of developmental disorder.

If the teeth be not thus attended to, porrigo scutellata will in some cases be obstinate for years. On the other hand, country air, to favour the progress of development, the regulation of the course of dentition by art, and attention to the secretions of bile and urine, by the due administration of alterative doses of calomel with ipecacuanha, and gentle aperients, will sometimes cure the disease in a few months—often in a few weeks. In most of the diseases of the skin in children, oxide of mercury, with chalk or with soda, or calomel in small doses, judiciously administered, has a remarkable effect in promoting secretion in the mouth, at the same time that the disease of the skin gives way to its influence. There are many cases, however, in which it is inapplicable. Invigoration only is wanted. Some children require for this purpose country air, chearfulness, and the absence of unpleasant controul, easily ensured only when that part of philosophy known as common sense is exerted in education. A boy was brought to me by an aunt, who had kindly undertaken to give him some country air, if it were advisable for him. She told me he was ten years of age, and had for the last six months become quite dull and stupid—a result that she had attributed to his mother's want of patience with him. He was of a strumous temperament, and was afflicted with porrigo scutellata: the submaxillary glands were very large, but soft; his tongue had the raspberry and cream character; his bowels were usually costive, but he took medicine sometimes; his breath was very offensive, and his whole body had a rank odour. He had no taste for reading, and his mother, who was a widow, attempted to instil it by scolding and cuffs. The boy said reading made his head ache, and that head ache was often followed by sickness and stomach ache, which he believed were good reasons for not liking to read. His teeth were in a sad state: the incisors were complete, but very yellow and dirty; the anterior bicuspids were in their places, the posterior bicuspids were in progress; the anterior molares in the upper jaw were decayed, in the lower one had been extracted, the other had the blue appearance preparatory to decay. There were large spaces preparing for the protrusion of the second molares, and the gums were here much swelled. I advised the removal of the bad teeth, and that the lad should take alterative doses of mercury, occasionally changing the medicine for milk of sulphur and cream of tartar, or senna tea and jalap; country air by all means.

Nearly a twelvemonth elapsed before I saw the boy again. He had been in Yorkshire and had lived well. He had shed the canine teeth, and was completing the cutting of second molares. I have seldom seen so striking an alteration. The boy had become a smart fellow, with a healthy and vigorous aspect. His aunt had coaxed him into a taste for reading.

Scalled head, ring-worm, scabby face, running behind the ears, are often observed by nurses to be coincident with dentition. It is when we apply learned names to these diseased states that our perceptions become more hazy:—warts, mollusca, porrigo favosa, scutellata and larvalis, urticaria, herpes, psoriasis, pityriasis, erysipelas: these I affirm to be not uncommon attendants on anormal dentition. Some of them are commonly coincident with the anormal progress of second dentition in children; others are found in those constiutions in which, from about twenty to fifty years of age, the wise teeth remain either hidden in the jaws, or are making slow efforts at development.

In the greater number of cases, discased states of the skin relieve the brain of its irritation; but there are conditions in which the mucous surface of the intestines is apt under such circumstances occasionally to manifest the suffering of a diarrhœa: but in other cases, if the discase of the skin abate for a time, the muciparous glandules are called upon for unusual duty, and a very abundant secretion of mucus takes place, which in a costive motion appears like pieces of fatty matter. When this condition is present, there is frequently a good deal of the remittent fever. Sometimes worms form—not an uncommon occurrence with children while engaged about their last deciduous molares, or about their first permanent molares. The fever, under this circumstance, is called the worm-fever. There is no doubt that when these parasite animals form there is always a cerebral irritation, during which the mucous surface of the intestines pour out a secretion that seems to be their natural nidus. The presence of the lumbrici in children, and of the various kinds of tænia, is attended with the moaning, starting, incoherent talking in sleep, grinding of the teeth, &c., which are signs of the infantile remittent fever;—signs, too, of irritation, in the centre of the nervous system, propagated from an irritated portion of mucous membrane. May not the change in the mucous surface, which favours the existence of worms, be regarded as resulting from an anormal condition of the development of the intestinal tube?

The distinctive signs of the infantile remittent fever may be merely light degrees of the symptoms attendant on cerebral irritation. When the developmental irritation is not very great, the fever subsides into a chronic state of disorder, and perhaps only some of those branches of the fifth pair of nerves which are destined to be the motor nerves of the eye may become irritated. In a chronic state, the friends of the patient do not perceive the error induced by this irritation so soon as the medical attendant: a slight strabismus is the symptom. The eye looks in towards the nose; occasionally it looks outwards. In the course of early development some entanglement of structure—some irritation on the mucous surface of the alimentary canal—perhaps even some turgid state of the dental capsules, may induce an irritation in the brain, which shall end in a squint. This squint is a part of the train of signs indicative of cerebral irritation—an irritation confined at first to that part of the nervous centre where the nerves meet which relate to the part irritated primarily; perhaps to the part developing erroneously, and to the muscles of the eye determining the squinting; to certain portions of the fifth pair, and to certain of its intimate associates.

Chronic hydrocephalus is a congenital disease—the result of malformation—of erroneous development aborigine, or at a very early date of intra-uterine life. When this disease is present, there is always an error of structure in the brain, generally too in the spinal cord, besides a consentaneous anormality, either as to size or epoch in the jaws and alimentary canal. It would seem as if an entanglement of structure during the progress of evolution could not take place in the brain without striking its vitiating influence upon the apparatus of assimilation. The nutrient organs embracing the parts concerned in mastication and assimilation are in very intimate relation with some portions of the brain, as is evinced by the facts of original anormalities of the brain influencing the development of these organs, and the errors in the growth of these

organs influencing the parcels of brain where their nerves concentrate. Errors in growth in all parts are liable to *varieties in degree*, and consequently the manifestation of inconvenience arising from their presence may vary too in degree. The irritation of worms in the alimentary canal, or the irritation upon a dental nerve, may be productive of a very slight strabismus, or it may be the forerunner of a squint, which strains the muscles beyond recovery:—The irritation may be accompanied by a turgid state of vessels about the optic nerve. It may have terminated in an effusion of fluid compressing a portion of the origin of the optic nerves. Amaurosis results. The effusion has been slight:—the fluid is reabsorbed without permanent injury to the nerve. The amaurosis vanishes when the irritation is removed. Should, however, the injury be more serious, and a permanent lesion of the nerve result, the sight is gone for ever. The same events affecting the acoustic nerve may produce deafness. An aggravated *degree* of the irritation productive of these mischiefs continues the trains of evil to a very high pitch of disease—epilepsy, apoplexy, hemiplegia, and coma.

The manifestations of irritated nervous centre are often symptoms of diseases wide of our present immediate object of research, which is, to trace out the point that the trains of symptoms constituting infantile remittent disorder are sometimes exhibited partially;—a few without the rest;—that they vary *in degree*;—and that when the degree of irritation in the brain coincident with anormal development of the nutrient organs is extreme, a congregation of most or all of the separate symptoms takes place, and the acute hydrocephalus is the disease which crowns the phenomena. The flush and discomfort;—the sudden heat of skin, which goes perhaps in a couple of hours;—the sick headache;—the starting;—talking in sleep;—moaning in sleep;—the sighing and discontent;—the transient squint;—the equally transient and irregular contraction and expansion of the pupil of the eye;—sometimes deafness;—tinnitus;—cough;—are merely slight degrees of the same states which occur, in a severe manner, in the acute disease, water in the head. Some diseases, originating in an erroneous course of growth, are peculiar to certain ages; but those occurring before the body has acquired a higher state of perfection, may present themselves at a more advanced epoch; those, however, which arise when the organs are more complete, do not belong to infantile age. Thus, water in the head may occur at nineteen or twenty-five; hysteria never attacks a child at the breast. Dr. Butter tells us (p. 11) that the infantile remittent fever is a disease to which "mankind are liable from the birth to the age of puberty." It has already been shewn that this is the period in which the larger number of teeth are in course of growth, and though it is not pretended that the anormalities in the growth of these organs are the sole causes of the production of this disease, I feel warranted in concluding, from extensive experience, that its presence, and that of its extreme acute form—hydrocephalus, is most frequently coincident with anormal dentition. Dr. Butter's period for the liability to the disease is under this view very limited. Anormalities in dentition have been found to occur even at nearly sixty years of age, and the developmental fever may, at that time of life, be very marked and very severe. A lady, forty years of age, applied to me more than a year ago, complaining of hemicrania; affecting, during its paroxysms, which were very severe, both her eyes, but principally the right,—that one on the side of the pain: the pupil of this eye was sometimes very considerably dilated, while the other was contracted. The paroxysms seized her at intervals of six weeks or two months, and confined her to her bed for several days together. There was a good deal of hysteria about her at times. Both in her paroxysms of pain and other times, she moaned and talked in her sleep. She is very apt to pick her nose, which itches considerably. In applying her attention to reading, she picks holes in the book before her. Her temper is very variable, and though an amiable person, she finds that occasionally she is subject to a dejected and discontented state of mind, without any cause that she can assign. When this state of mind comes on, she knows that she is soon to have a paroxysm. Her pulse then ranges above a hundred, and she is chilly. Afterwards she becomes flushed and hot, and at night perspires profusely. A hard, dry cough and a sick headache come on, and then the hemicrania takes possession of the right side of the head. Sometimes, for a short time, she becomes blind, and as the sight

is recovering, her sensibility to light is extreme. Her bowels were always costive, and her evacuations were most commonly scybalous, and of a greenish clay colour.

This lady has been liable to her attacks of illness about six years. She cut two dentes sapientiæ in the upper jaw soon after her first attack, and was afterwards for a long time much better. She never remembers to have lost more than one tooth since she was a child: she has now in the upper jaw fifteen teeth, the posterior bicuspid on the left side being wanting. In the lower jaw, there are fourteen teeth much crowded, and the incisors overlapping each other. The jaw is small, yet the spaces for the wise teeth are enlarging: the teeth do not appear to be near. This lady will, of course, be liable to her attacks of illness till the efforts to overcome the obstacles in the way of her two teeth are either triumphant or succumb; or it may be that a new train of disorder coincident to these efforts at development may arise. In the meantime, she has been enjoined to keep the bowels regular as to consistence, colour, and quantity of the dejections,—a strict and daily attention to which measure ensures her more ease than she was wont to have.

Having shown that this disease is not so limited in its period as the authorities would indicate, I may endeavour to shew that it is different only from acute hydrocephalus in degree.

In the month of March 1831, I saw a nice interesting boy, of four years of age, suffering from a very severe attack of the infantile remittent fever. He had a dry, hard cough; hot, burning skin; suffused and anxious countenance; rapid pulse; peevish manner; great thirst; moaning; starting; picking; and other signs of the disorder. The head was remarkably hot, and the breath was very offensive. I examined the boy's mouth, and found that he had large spaces in the upper jaw, in preparation for the first permanent molares. In the lower, the spaces were not so large. I divided the gums in the upper jaw, but the teeth were rather deep-seated. Six grains of calomel, at night, was all the medicine the child took; and the next day, two dark motions seemed to remove all his symptoms. On the 7th of September, this little fellow was again taken ill in the night. He had severe pain in the stomach, a burning skin, and great thirst. The mother thought the boy had swallowed a plum-stone in the course of the day, and immediately made some senna-tea for him, which had operated twice before I saw him at 11 in the morning. The motions were dark, scybalous, offensive, and slimy; copious, with much fluid in them. They had relieved him a good deal, but he was still very ill. There was a fretful discontented aspect, constant whining; he picked at his nose and lips incessantly, and cried out if much light was admitted into the room. His pupils did not contract alike; when a little light was admitted, the pupil of the right eye almost closed, while that of the left contracted very slowly. The right eye was slightly turned in towards the nose. The tongue was loaded at its back part like chamois leather, and at its fore part it had decidedly the cream ground, with the raspberry papillæ. The skin was dry, but not very hot; the pulse was 96, small, and wiry. He had not been well for three or four weeks. Ever since his attack, in March, he had perspired profusely in the night, and ground his teeth, and muttered occasionally. His mother, thinking he had worms, gave him some powders prescribed by a medical friend. These opened his bowels; and he had one given him at bed-time every now and then, but no worms were discovered in his motions. He would often be awake at three or four o'clock in the morning—would wish to drink, and would remain awake for an hour or two talking; then he would fall asleep again, and be in a burning heat. At other times he slept and perspired profusely. I remarked the squint, and was told that ever since March he had occasionally squinted, but "it came on and went off," and so little was thought of it. He had often nettle-rash upon him, but she had seen nothing of this for the last six weeks. I gave the child six grains of calomel, and saw him the next day.

September 9th.—The little patient slept well, though occasionally through the night wanted toast and water. Has had two stools. Green bile and mucus. Urine high coloured, copious. Skin moist; tongue cleaner, but still loaded with a white instead of a dark crust. Belly soft; does not like it to be pressed. Temper fretful; expression cross and discontented. To take a table-spoonful of the following mixture every two

hours, taking after it toast and water *ad libitum* :—

℞ Sulphatis Magnesiæ, ℥iij.; Sulphatis Potassæ, 3ij.; Sulph. Sodæ, ℥j.; Sacchari Purif. 3ij.; Aquæ Menthæ Sativæ, Oss. M. fiat solutio.

In the evening;—copious watery stools, with slime, all day; at first dark, then light clay-coloured, dirty water. Urine scanty: but this report not, perhaps, quite correct. Abdomen flatulent; child will not have it touched. Skin hot; tongue much cleaner; pulse 140. The child is restless and cross. It has a teazing dry cough, and oppressed respiration.

℞ Calomel, gr. ij.; Extracti Opii, gr. ½. horâ decubitûs. Cras mane; Olei Ricini, ℥ij.

10th, (10 o'clock.)—He has slept very little; has ground the teeth at intervals all night; has started frequently; has occasionally cried out, and talked incoherently — sometimes muttered. Has perspired profusely all night. Bears the abdomen to be pressed, and is in better spirits. Vomited the oil this morning. Has had no motion. Pulse 96, soft; tongue cleaner. The mother is confident he will get well: she asks why he picks with his fore-finger so much? The nostrils are sore from being picked, and yet the boy continues at them.

At eight in the evening, the boy is said to be better in every respect, except that, within the last two hours, he has been very drowsy, and the skin was rather hot. He is now asleep, and is perspiring abundantly. He has a thumb in his mouth. One motion to-day, dark and offensive. He coughs less frequently.

11th, 12th, 13th, 14th, and 15th.—The boy has continued much the same; picking, starting, moaning, perspiring, every night. He has had rhubarb and magnesia, mercurial and chalk powder with scammony, and once calomel.

16th, at four in the afternoon, I find him with strabismus of the right eye: its pupil dilated. In the left eye, the pupil dilates and contracts very irregularly. Deep sighing. Pain in the right hypochondrium, increased on pressure. Wandering, anxious, restless expression of countenance. Awoke several times last night screaming. Pulse very irregular. Tongue raspberry and cream. Bowels not open to-day. To take of calomel ten grains. Warm-bath, at 98 Fah. for half an hour.

17th, at nine in the morning.—The child screams at intervals. Pupils both much dilated; countenance sunken—anxious; has had a wretched night—tossing and crying out. One small motion this morning, black and pitchy. A great abundance of urine, which is not high coloured. Screams upon being touched; cannot bear pressure, especially on the right hypochondrium: sometimes the boy puts his hand there in the lightest and gentlest manner, and then puts it to his head. This short illness has produced great emaciation. The mother reminded me of my having lanced the gums six months before. I was confounded that I had, up to this moment, omitted to look into the mouth. The idea of the teeth developing flashed upon my mind. I examined the mouth. The first permanent molaris on the right side of the upper jaw was through the gum nearly one year and a half before its normal time. I liberated the tooth on the other side: it was ready to come through; and I scored down with the gum-lancet upon the two corresponding teeth in the lower jaw. The child was exhausted, and fell asleep. The mother was directed to put him into a warm-bath whenever he should awake. Two hours afterwards the boy was still asleep. In the evening the mother called upon me, to tell me he had had a bloody stool; but as he had craved for tea, and bread and butter, she had given him some, and he had eaten with an appetite. The next day the boy was sitting up, well, without squint or fever.

An interesting and engaging little girl, of five years of age, was born with two teeth. They were inferior incisors, and dropped out to make way for others which have taken their place. At a very early period, this child began to squint; the right eye looks towards the nose. This squint is at times much more marked than at others. A medical friend in the country had, from this circumstance, prognosticated the approach of the acute hydrocephalus. He felt confident that the child would, sooner or later, be seized with it, and he was right. The little girl had been subject repeatedly to slight attacks of the infantile remittent fever. Calomel and senna had generally put the matter to rights. At last an attack came on which lasted

several days, unaffected in its course by any medicine that could be given. Calomel and other purgatives gave no relief. The child laid herself down on the couch and screamed if any one approached her. A touch on any part of her body seemed to give her agony. She was drowsy; had an offensive breath; a foul loaded tongue, with the raspberry and cream appearance at the edges and fore part, and the evacuations produced by calomel were dark and bilious, with scybalæ. The pupils of the eyes contracted closely upon the admission of light, and the child screamed out to have the room darkened. I found that the deciduous molares were all decayed, and the first permanent molares had, in both jaws, been in their places for some considerable time. Those of the lower jaw were much decayed. I proposed that they should be removed, but the parents could not, at first, be brought to consent. The next day the child was worse: the pupils of the eyes much dilated, the fever high, and all the symptoms of acute hydrocephalus present. Medicine seemed to have no power over the disease. The two first permanent molares of the lower jaw, useless and decayed teeth, were removed: the progress of development in the lower jaw had room for its march. From that time the child began to get well, and in three days was playing about with the other children.

I was requested last autumn to see a boy, nine years of age, who had been three weeks ill of a severe remittent fever, under the care of a very intelligent general practitioner. The head had been shaved and blistered; repeated applications of leeches had been had recourse to; and all the medicines usually administered in such cases—calomel, &c., had been given. The boy was in bed, still very ill, with a rapid pulse, an anxious and fretful aspect, and a severe headache. I suggested that as he had not shed the lateral upper incisors, and as the deciduous upper molares on the right side were very much decayed, all these teeth should be removed. The gentleman was liberal and kind enough to attend to my suggestion directly. I saw the patient the next day, playing about, quite well.

[To be continued.]

PORRIGO DEPENDENT ON CONSTITUTIONAL CAUSES.

To the Editor of the Medical Gazette.

Sir,

As I have reason to believe that some observations on Porrigo, made by Mr. Lawrence, in a recent lecture on cutaneous diseases, have produced an impression which they were not intended to create, and contrary to that which I must consider to be a correct view of this hitherto obstinate class of diseases, I take the liberty of requesting your insertion of the following remarks. On inquiring into the subject, I find, from Mr. Lawrence himself, that he did not only remark generally on the connexion of cutaneous diseases with the general health, but particularly enforced the evidence of that connexion afforded by the whole class of such affections in children; at the same time he mentioned that some years since, when his opinion was requested on the cases of porrigo then existing in Christ's Hospital, he never saw so large a number of individuals in such excellent general health; and it was very remarkable, that in the preceding year not a single death had occurred in that establishment, containing, he believed, about 1200 children. Now, sir, lest the mention of this fact should lead to an inference which I contend it does not justify, and which it was not intended to convey—viz. that porrigo is not in any way connected with disorder of the general health, or dependant on constitutional causes; drawn as it is too from a source which I apprehend supplies abundant argument in support of an opposite view of the subject—I beg to state that the occurrence of porrigo, without *manifest* disorder of the general health, is mentioned in a work which I lately published on that disease; wherein I have endeavoured to shew, by arguments both general and particular, that it is nevertheless dependent on constitutional causes. As the detail would occupy too much of your columns, I will merely state that the arguments are drawn chiefly from these facts: first, the number of other local diseases which are presented to us, without any other manifestation of general disorder, but which nevertheless require a treatment strictly constitutional for their safe removal; and, secondly, that as regards porrigo in particular, no cases

more certainly require for their relief the treatment which I have recommended than those in which the ordinary manifestations of disordered health are obscure, or altogether wanting; shewing, as it appears to me, that in such instances the local disease is emphatically the manifestation in question. With regard to Christ's Hospital, for reasons which it is unnecessary to state, I purposely avoided any remark on it; but now that it has been mentioned, I would observe, that so far from any thing in the history of porrigo, as occurring in that establishment, militating against the dependance of that disease on constitutional causes, it strongly supports the opposite view of the question. In my observations on porrigo, I state broadly that the average time required for the successful treatment of that disease in its various forms (the decalvans only excepted), is six weeks, and that this is the result of an experience of twelve years, afforded by one of the largest dispensaries in London (the Finsbury). The treatment, which is chiefly (I might almost, as regards the argument, have said entirely) constitutional, consists of a farinaceous vegetable diet, and such medicines as in different cases are calculated to regulate the venous secretions, with great cleanliness, &c. locally. Some years since I was consulted with regard to a boy at Hertford, and I recollect being then struck with the peculiarity of the diet of the establishment. I yesterday only was able to procure a scale of that which is at present used, of which I transmit a copy.

Diet Table, Christ's Hospital, London.

Breakfast—5¾ oz. bread; ½ pint of milk and water.

DINNERS.

Sundays—4 oz. roast mutton; 8 oz. potatoes; 3 oz. bread.

Mondays—4 oz. boiled beef; 5¾ oz. bread; broth unlimited.

Tuesdays—8 oz. plum pudding; ½ oz. butter; 3 oz. bread.

Wednesday—4 oz. boiled mutton; 5¾ bread; broth unlimited.

Thursday—same as Sunday.

Friday—as Monday.

Saturday—5¾ oz. bread; ¾ oz. butter; pease-soup unlimited.

SUPPER.

Sundays—5¾ oz. bread; ¾ oz. butter.

Week days—Do. bread; 2 oz. cheese.

Note subjoined to the Scale, as received by me from the Hospital.

It requires nearly *eight ounces* of undressed meat to produce four ounces, when dressed and without bone.

From June to September the children have 5¾ oz. of bread with roast meat, instead of potatoes.

On perusing the above scale, first I remark, that no difference appears to be made as to the varying ages of the individuals for whom it is prescribed; secondly, there is a very unusual quantity of animal matter, as regards those of the number who may be considered as children; thirdly, the paucity of fresh vegetable is equally striking, the boys only having potatoes twice a week, and these being withheld during three months in the year—viz. from June until September! lastly; butter, broth, cheese, and *plum* pudding, are habitual articles of diet, and broth, *whenever* allowed, unlimited. The contrast here shewn between the diet in Christ's Hospital and that which I have found so successful in the treatment of porrigo, is certainly very striking, and forces on us, I think, the idea that it may explain the extraordinary prevalence of porrigo in that institution. The length of my letter, however, obliges me to conclude. I would by no means assert, without further investigation, that the adoption of the plan which I have found so successful, with certain modifications in the ordinary diet, would rid Christ's Hospital of the disease by which it has been so long infested—there may be other causes which are yet unknown; but I have considerable confidence in its so doing; and at all events none of the facts afforded by that establishment militate against my views of the nature of porrigo, still less against the treatment which I have found so successful. That general prudence in diet is not sufficient, but that the disease requires one specially adapted to it, is rendered probable from Mr. Abernethy having been surgeon to the Hospital, who, it may be safely presumed, would not have neglected a caution as to *quantity;* and although I do not specially prescribe them, yet I speak particularly of the benefits resulting from

a diet chiefly composed of an article which, in Christ's Hospital, is remarkably scanty (potatoes), besides forbidding altogether the animal matter, which, on the contrary, is given in excess. I should not have mentioned any individual establishment, had not a misconstruction of a fact, delivered in a lecture by Mr. Lawrence, made it appear that the facts afforded by Christ's Hospital militated against views of disease which, from abundant experience, I have every reason to believe to be correct; which have stood the best and only real test—that of practical application; and which the institution itself appears, by at least strong presumptive evidence, to support. The whole question is one on which the collective experience of the profession must decide; I only lay claim to having, in my observations on porrigo, brought forward sufficient facts to entitle the plan to an unbiassed trial.—I have the honour to be, sir,

Your very obedient servant,
GEORGE MACILWAIN.

Argyle-Place, Jan. 2, 1834.

P.S. The diet of the Hospital requires much farther observation, but I must reserve this, having already, I fear, trespassed too largely on your valuable columns.

ERGOT IN HÆMORRHAGE FROM THE NOSE.

To the Editor of the Medical Gazette.

SIR,

IF you consider the following notes to afford any confirmation of the alleged powers of the secale cornutum in arresting hæmorrhage, you may perhaps think proper to append them to the list of cases published in a recent number of your journal.

I am, sir,
Your obedient servant,
RICHARD LAMING.

48, Finsbury-Square,
Jan. 4, 1834.

Mr. G——, aged about 55, and of a gouty and leucophlegmatic diathesis, was taken on Sunday, December 15, with epistaxis; from the occurrence of which on several former occasions he had been considerably reduced. It commenced at half-past 8 A.M. and lasted vigorously till 10. At 7 the same evening it recurred for about fifteen miutes.

December 17th.—It took place a quarter before two, and again at nine A.M.; lasting each time about half an hour.

18th.—It recurred a quarter before three, and continued violently till four; again at five, lasting half an hour; then at eleven, for an hour and a half; and at nine P.M. it again appeared for the fourth time this day. Up to this hour the ordinary measures had been adopted with but very temporary success; and on the two latter days the powdered secale cornutum had also been exhibited several times, in doses of six grains. I now resolved to make a fair trial of the ergot in larger doses; and, immediately on the recurrence of the bleeding at nine o'clock, commenced by exhibiting three grains of Battley's extract. After this dose, the epistaxis continued five minutes.

19th.—The patient was this morning awoke by the bleeding, at a quarter before four; and thereupon swallowed a draught containing three grains of the extract. This he repeated twice, after intervals of ten minutes; the third dose apparently putting an end to the discharge of blood in about fifteen minutes.

20th.—No return of the bleeding this day, although the patient rose from bed (for the first time since the attack) at eleven A.M. and remained sitting up eleven hours.

21st.—Four grains of the extract were given this morning, on the recurrence of the bleeding, at a quarter before nine, which it stayed in five minutes. The patient left his bed this day for nearly twelve hours.

22d.—The bleeding returned this morning, while rising, but was discontinued in five minutes by four grains of the extract.

23d.—Four grains of the extract were exhibited morning and evening this day, each time putting an end to the bleeding after five minutes.

January 4th, 1834.—Since December 23d, the bleeding has entirely ceased. The whole quantity of extract taken was twenty-eight grains; and it seemed to produce no other than the described effect.

A WARNING TO GENERAL PRACTITIONERS.

To the Editor of the Medical Gazette.

Sir,

You have ably exposed the little coterie who seek to buzz themselves into notoriety, and would make the public believe they represent the great body of the medical profession; but you have not sufficiently pointed out the insidious tendency, and the real objects of the "One Faculty," which are no other than to annihilate the entire grade of general practitioners, and restore the monopoly of medical practice into the hands of the physicians.

It is proposed that every member of the profession should have the highest qualifications—should have the title of M.D.—should serve no apprenticeship—and should not soil his fingers with drugs. What else, I would ask, is this, than to restore that very monopoly which was extinguished nearly one hundred and fifty years since? What else, I would ask, are these practitioners, if they are not to be the same as the physicians of the past and present day? with this difference, that the juniors will take a lesson from the folly of their predecessors, and will condescend to take smaller fees.

The present race of general practitioners are to be bribed, perhaps, to betray their order, by being admitted within this new pale, from which their successors are to be excluded; and each is to enjoy the enviable title of M.D. For one, I should scorn to accept a boon gained by such a dishonourable sacrifice. I can only account for the disregard which has been shewn by the profession generally to these proceedings, by supposing that they have been viewed with silent contempt, and that the great body of the general practitioners, aware of their strong hold on public favour, consider that they shall possess public patronage so long as they continue to deserve it. They have been created by no Faculty or Corporation; they have been called into existence by the public alone—by a power greater than any College, and greater even than any law, when that law militates against either public wants or public convenience.

If the members of the "One Faculty" should hope to obtain that portion of public favour which is held by the general practitioners of the present day, they will be grossly deceived; for such is the prejudice of human nature, and such the objection of the great bulk of mankind to the payment of money for words alone, that if the general practitioner were to charge only a shilling for his visit *on every occasion*, he would cease to be employed in two-thirds of the cases in which he is consulted at present. The public would, in serious and alarming cases, be content to pay fees; but they would trust to their own resources in other cases, or consult the druggists, who would then follow the steps of the apothecary, gradually rise in public favour, would fight the same battle with monopoly, and, backed by public patronage, with the same success; the difference would be, that the general practitioner of the next age would be called druggist instead of apothecary.

It is, however, preposterous to suppose the legislature would sanction any law which would prevent this mode of practice, or make medical education so expensive, as to limit the supply of medical aid in the way most approved of by the public, and best adapted to the wants of the most numerous and least wealthy classes of the community. Medical education, like other commodities, has become infinitely cheaper than at former periods; and it is but fair that the public should have the benefit of the change, in an abundant supply at a moderate rate, and in the mode most convenient to themselves.

The public have too long experienced the benefit derived from the grade of general practitioners in this country, not to give them their support; and should individuals desert their order, the void would soon be filled up. Candidates for public favour are too numerous to allow any mode to be passed over by which patronage can be obtained.

It is not my intention to assert, that the medical profession is incapable of great and important improvement, more especially as regards the general practitioner, who, by substituting a general charge for a specific one, of petty items or daily visits, would most materially increase his own respectability, without

diminishing his emolument or sphere of utility, and without awakening public prejudices.

The medical reformers have mistaken their object. It was their business to seek to adapt the existing institutions to the present state of, but not to re-organize, the whole profession. Under the cloak of improvement, they have sought objects incompatible with the improved state of the age, and in utter disregard of the wants of the public, who, if they have not created, have supported the present distinctions, and who, instead of the corporations, are the real arbiters of the profession. These reformers have yet to learn, what has long since been discovered in political economy, that the division of labour is essential to perfection; and, moreover, that the public are a body too mighty to be controlled by any institutions, except such as conduce to their benefit.

I am, sir,
Your obedient servant,
A GENERAL PRACTITIONER.

January 6, 1834.

MEDICAL GAZETTE.

Saturday, January 11, 1834.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

MISREPRESENTATIONS CORRECTED.

THERE was a time, certainly, as Dr. J. Johnson very justly observes, when we treated him with more courtesy than we now do; but it is rather ridiculous for him to suppose that our present conduct towards his editorship has been assumed simply because he "wisely" (as he says) "determined to desist from all hostilities with the Lancet*." This we saw and pitied. But when we found the Editor of the Medico-Chirurgical Review not satisfied with crouching to him of the Lancet, and spaniel-like licking the hand that chastised him—not content with swallowing his own words, but borrowing those of his quondam castigator, in order to revile and misrepresent his former connexions, we own we felt that courtesy would be thrown away. We were only amused with his proceedings, however; for we perceived that his inconsistency was exactly hit off by the remark of the old satirist—

"Nil fuit unquam
Sic impar sibi."

The only serious determination we came to about the matter was, not to suffer him to run a-muck, and spread the infection of his new principles. How necessary it was for us to do so, is now made apparent. In the article on Medical Reform with which the Lancet-bitten Editor has favoured his readers this month, we find him labouring under strong symptoms, and venting freely the *conventional* cant of his present party. He talks with volubility of the "*Tiers-etat*," and the "*noblesse*" of the profession—of the "*unhallowed* tie that binds physic and pharmacy together"—of the "Hong-merchants of Blackfriars"—and of the "*Pures*." The "*Bats*" we have not observed among the newly-adopted classic terms of the Medico-Chirurgical; and the absence of the "*Dubs*" we suppose we can account for, since it is to be a *sine qua non* in the new *sole Faculty*, that all men belonging to it shall be Dubs—that is to say, Doctors. By the way, Wakley himself has been particularly tame of late about the Dubs, no doubt because he offers to make Dubs, "for a consideration," at his own Collegium; this, however, by the by—it is not with Wakley we have to deal at present, but with his friend of the Medico-Chirurgical Review.

Our readers need be under no apprehension that we mean to follow up our ample *exposé* of last week with an additional chapter; we have, in fact, only a supplementary note or two to write, in order to correct certain *misrepresentations*

* Medico-Chirurgical Review, Jan. 1834, p 284.

which have fallen from Dr. J. Johnson in the last number of his journal. Though we can make large allowances for the reckless system of bold barefaced assertion without proof in which the party with which the Editor of the Medico-Chirurgical Review has latterly associated, constantly indulge, we confess we were not prepared for some of the intrepid statements relative to this journal on which Dr. J. Johnson has ventured recently. These statements we must notice, not for the sake of setting ourselves right with our own impartial readers—which would, we are persuaded, be wholly superfluous—but for the information of those wise ones who pin their faith on that worthy Editor's sleeve.

His general charge or insinuation, that we uphold the medical corporations in their present form, and encumbered with the abuses which we have so frequently pointed out, is too notoriously untrue to be believed by any, except perhaps by those who know nothing of our journal: we can smile at the silliness that dictated such an assertion. When, however, Dr. J. Johnson comes to particulars, and states, for example, that we advocate the apprenticeship system, we cannot help being both surprised and pleased, but more particularly the latter; for it enables our readers to see the wrongheaded misconception, or the wilful blindness, of our opponent. He is caught in his own toils. If he confined himself to general assertions, and argued that, because we rejected in the lump his one Faculty project, therefore we were the conservatives of all existing systems and their abuses, he might have been believed by some few shallow dupes of his party; but he has been foolhardy enough to come to particulars; we are glad of it, for there is nothing like the evidence of facts.

The Editor of the Medico-Chirurgical Review says, "Our contemporary is horrified at the idea of general practitioners rising to a par with the Scotch doctor, and very wisely advocates the system of keeping him back in the ranks of science by a five-years' apprenticeship behind the counter."

Now this single sentence contains a gratuitous assumption and a statement wholly destitute of truth. Nothing can be more purely untrue than that we ever advocated the apprenticeship system. This all our readers know, and more particularly some of them from whom we have received remonstrances for the stubbornness of our opinions on the subject. We combatted unhesitatingly the apprenticeship system whenever it came in our way—nay, we often went out of our way to grapple with it: we wrote special articles against it—ridiculed it—reviled it—proved repeatedly its total unfitness as a mode or form of education for young men entering a liberal profession; and we can fearlessly refer Dr. J. Johnson and all his disciples to our pages *passim**, and we defy them to make good the contrary.

The gratuitous assumption in the sentence above quoted, can only be imputed to pure ignorance, if not a wilful misapprehension, of our meaning, when we asked Dr. Johnson a plain question. We asked him, in a late number, whether, by his expression of "levelling upwards," and his blustering about making the present *maximum* of education the *minimum* under the Faculty system—whether by this he meant that the candidate practitioner, under the new *regime*, should possess "an amount of education equal to that taught by the Irish and Scotch Universities?" Now what says the worthy Editor, in reply? "We unhesitatingly answer in the affirmative. We aver that the education of the general practitioner is now very nearly as good, and *ought be* (sic) somewhat better than that of the Scotch Doctor who asks the question."

* See particularly the editorial article in Med. Gaz. vol. xi. p. 121; also the remarks in vol. xii. p. 183, and p. 396.

On the affirmative part of this answer, we confess we have no observation to make, for it needs none: it is so unblushingly absurd. But the averment in the next member makes us hesitate, and suspect that all is not right with the intellectuals of the respondent. What he says, amounts to this—that the general practitioner (observe, the term is in the abstract) is nearly as well, if not better, educated than a certain *individual* whom the worthy Editor sagaciously denominates the Scotch Doctor: *ergo*, he holds that his affirmation is strengthened. Dr. Johnson, in a note (which we refrain from further noticing, because it is sheer nonsense), facetiously says something about an "Irish kind of proof:" we cannot have a better example of both *proof* and *conclusion* than that which he gives us in his reply to our interrogatory.

Another thing in connexion with his reply, may deserve a passing word or two of notice. We observe that Dr. Johnson is particularly smart, in his own estimation, when he aims sundry hits at a certain "Scotch Doctor," whom he identifies with "our contemporary," and the person who put to him the above question. We are sorry to be obliged to spoil the harmless hallucination under which the worthy Editor labours: he is evidently well pleased with his own sagacity; but we feel it our duty, for truth's sake, to inform him that WE—even we who write—who exposed his "one Faculty" bubble—who put to him the simple question at which he has blundered so amazingly—*we* have not the remotest claim to the honour of being "a Scotch Doctor;" we never were beyond the Tweed in our life, nor have we ever even been favoured with a St. Andrew's degree.

We had almost overlooked a query put to us by the learned Editor of the Medico-Chirurgical Review. "And what says our contemporary," asks he, "to the separation of physic from pharmacy there (in France), and the establishment of one uniform system of education, where every practitioner must have his doctor's degree before he can enter upon the duties of his profession?" We reply *instanter*, in the words of Mrs. Glass—"First catch your fish." First *let us see* physic separated from pharmacy in France, and then let it be evident how the system works. It is rather premature, we think, in our contemporary, to hold up the example of a foreign country, when the *project* alluded to is only *in embryo*. It is quite time enough, we fancy, to imitate the French when they have set us an example; and not for us to make the experiment by which that may be proved of which they have as yet been only talking. As to the plan itself, of requiring every practitioner to have his doctor's degree in his pocket before entering on the duties of his profession, quite contrary to Dr. J.'s anticipation, we can offer no objection in the world to it, save one; and that is, that *among us* it is impracticable. In this country there always will be a class of practitioners required—and it will be forthcoming—who shall minister to the bodily ailments of the people *immediately*. If the general practitioner (then improperly so called) choose to consider himself a doctor, and to discard the supplying of medicine to his patients, many of them, we predict, will fly to the chemist and druggist, and seek, in the accustomed way, both medicine and advice together. It is very difficult to break people off their old habits: the distinctions of *faculties*, whether they be one or twelve, cannot be readily inculcated on the preoccupied minds of the community; and if it be sought to oblige the lower orders to seek the doctor first, and then to take his prescription to the apothecary (as the druggist then will be), and thus to pay twice, where they had to pay only once before, we apprehend that a rich harvest will be pre-

pared for the humbler functionary of physic. The chemist and druggist, in spite of any laws to the contrary that may be framed, will become *de facto* the general practitioner; and the dubbed Doctors of the Faculty will have, we fear, but a poor chance of profiting by the change. We are glad to find that this view of the question has begun to be seriously considered by several of the more respectable general practitioners; and we invite the attention of our readers to the remarks of one of that body, in our present number, who sees as clearly as could be wished through the mystifications of certain *soidisant* reformers. Dr. J. Johnson calls the connexion between physic and pharmacy "unhallowed:" what he means by the epithet we are sure we cannot guess; but we suspect it is only one of those choice classical allusions so familiar with the learned Editor—"full of sound—signifying nothing."

In a note to the Editor of the Lancet, just published, (Friday, 10th) Dr. J. Johnson protests against being supposed to have said, at the Westminster Medical Society, that he "had entered into an arrangement with the Lancet," and says he can produce a hundred witnesses to prove that he made use of no such expression. Now we repeat that words *to the above effect* were used: and we would beg to remind Dr. J. J. that his memory is rather treacherous,—not always to be depended upon, with regard to expressions used at the Westminster Society: witness the double reading of what was said touching Dr. Stevens. *Verb. sat.* As to the quibble on the word "combination," on our wrapper, it is perfectly contemptible. But the substance of Dr. J. J.'s note, (like what has been said of a lady's letter) is in the postscript. DR. J. J. CONFESSES HE WAS "MISTAKEN" IN ATTRIBUTING THE ANTI-LEVELLING ARTICLE TO DR. DILL.

Of the inconsistencies of his journal, as set forth in our number of last week, Dr. J. Johnson offers not one word of defence. "I am only sorry," says he, "that he (the Editor of the Medical Gazette) did not make a selection from my journal more useful and instructive to his readers."

WESTMINSTER MEDICAL SOCIETY.

THE BALLOT.

CONSIDERABLE pains having been taken in the previous rehearsals, the performers were on Saturday evening perfect in their parts, and the whole went off with great *eclat*. The entertainments consisted in a succession of orations against the President, Dr. Gregory, who was regularly and systematically bullied; the speakers being well prepared, and going through their business with great zeal and spirit. The accusation on which they rung the changes, so as to present it in every possible variety, consisted in this—that the Doctor had supported the "One Faculty" scheme in the committee, and opposed it in the Society; which accusation we presume to be true, because Dr. Gregory, who presented the extraordinary spectacle of the chairman of a meeting constituting the butt against which every speaker directed his shafts, sat during the whole evening a model of patient sufferance, without once denying what was imputed to him, and without attempting to answer, or even to check, the exuberant oratory of his accusers. The President having been sufficiently brow-beaten, the members proceeded—not to any vote of censure upon him, as we expected from the preliminaries, but to express an opinion of their own proceedings during the previous three nights—which they might have extended with great propriety to those of the whole season—namely, that they were irregular, informal, and worthless; so much so, that nothing less would satisfy the justice of the case than their being entirely expunged. The mode of effecting this puzzled them not a little; for several of the members felt the absurdity of their predicament, especially as the rule of the Society was, that on all scientific questions the ballot was to be announced one evening and taken on

the next, that all who were desirous of voting might have due notice,—as had been done in the present instanee. However, in this dilemma, up rose the great authority of the plaee, who declared that the question touehing the "One Faculty" was not a matter of "seienee;" which deliverance from the diffieulty of emulating the eonsistency of their oraele, and stultifying their own proceedings, was received with eheers of delight. The ballot was again called for—the ballot was again taken--and the former ballot declared to have been no ballot at all! It was really an amusing and most edifying seene:—the whole party were in eestasies; for, till the happy, but most just remark was made, that their "Faculty" had nothing to do with science, they had looked upon it as a lost case. We have taken the liberty of laughing a little at the proceedings of this "grave and learned" soeiety, as our readers know; but not ill-naturedly; for they are really very harmless. No description, however, can convey an idea of the scene;—it requires to be transported to the very spot, —that they represent the *sense* (!) of the and to see the group of busy important faees of those that one meets with no where else, but who regularly fret their hour every Saturday evening on the clay floor in Hunter's old Museum, and talk and talk, till they persuade themselves that they are very important personages. It may seem ridieulous, but we know that several of them have this variety of monomania, and say—for we have heard them do so in pure simplicity profession. It would be as well, perhaps, if they would first shew some sense in their own proceedings; for at present they constitute a perfect chaos. Thus: of several hundred persons who are nominal members of the Westminster Medical Soeiety, it appears, by the reeent votes, that from fifty to sixty is the greatest number that can by any means be got together,—not more than sixty-two having assembled on the last evening, even after all the whipping and spurring of those whom the Editor of the Medieo-Chirurgieal Review used to call the "radieal levellers." Of those, a majority have deelared the ballot on the "One Faculty" question, (the legality of whieh their leader himself aeknowledged by voting) to have been informal. It is therefore given out, that the stupid resolution about "One Faculty" has been adopted by a large majority; but the vote on which this assertion is made related to quite a different point—namely, whether the former ballot had or had not been in rule. Now *thirty-one* deliberately voted against that very measure which is stated to have been earried by this same large majority, although sixty-two be the greatest number that ever balloted on the question!!! So much for the proeeedings of the Westminster Medical Society.

LONDON MEDICAL SOCIETY.

REFORM PETITION.

The following very sensible petition was adopted unanimously by the members of this Soeiety on Tuesday evening last. It will be seen that the "One Faculty" has not found any advocates among them.

The humble Petition of the President, Viee-Presidents, and Fellows of the Medieal Society of London,

Sheweth,

That the Soeiety to which your petitioners belong has been established for a period of sixty years, and consists of physicians, surgeons, and apothecaries, who associate together for the promotion of medical science.

That your petitioners have long experienced many and serious grievances affeeting the various branches of the profession, and are anxious to submit the same to a Committeee of your honourable House; and therefore implore that your honourable House will be pleased to institute an inquiry into the state of the medical profession, and into the regulations of the different Colleges, Corporations, or Faculties connected therewith; relying with perfect confidenee that your honourable House will see the propriety of legislative interference, and will cause such enaetments to be made as shall tend alike to the improvement of the profession and the preservation of the public health.

And your petitioners will ever pray, &c.

CLINICAL OBSERVATIONS ON LUXATION OF THE VERTEBRÆ, AND ON *Maladies which seem to present that Condition.*

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

Luxations of the various parts of the body have been so well observed, and so

carefully described—and this department of surgery has been brought to so high a degree of perfection, that it would seem as if nothing more were to be desired, that the facts already ascertained were sufficient, and that we had now only to abide by the principles laid down in books. Yet it is not exactly with this branch of the medical art as it is with others, the precise boundaries of which are apt to escape the eye of the observer until certain difficulties are surmounted that concealed them from his view.

The vertebral articulations, placed as they are, in consequence of their limited actions, and the nature of their mutual connexions, at the bottom of the scale of those combinations of bones which are endowed with motive powers, have always been thought particularly safe from luxations, which are so frequent about parts that have a more extensive range of movement; and, indeed, if the luxations of the first cervical vertebra, or the second, be excepted, they have been either not noticed at all, or directly denied by the generality of authors. Many of the older authorities, it is true, have spoken of these luxations; but, as they have not given us the *post-mortem* examinations, which could alone corroborate their remarks, we cannot attach much importance to what they say—or, rather, we should reject them altogether. It is especially since pathological anatomy has enabled us to trace morbid effects to their causes, that the idea of the possibility of these luxations seems to have been renounced. And in truth, the number and the strength of the ligaments which unite the vertebræ, the almost vertical or slightly oblique direction of their apophyses, the mutual adaptation of their upper and lower processes, the extent of surface by which the bones touch each other, and their very limited motion—all this would seem to render vertebral luxation very difficult. Then, if we take into account the facility with which the bodies of the bones break during life, in consequence of efforts made by the spinal column; or after death, as has been ascertained in numerous experiments;—we shall be on the whole not greatly surprised at the conclusions on which most of the moderns have fixed relative to the nature of this disorder.

The arrangement, above all, of the articular apophyses of the vertebræ presents such obstacles to luxation of those bones, that some authors have found it difficult to conceive how it could happen so long as those apophyses subsist. There is much plausibility in this opinion; and it will derive no small weight from the cases which I shall presently recite; although in two of them the luxations might have occurred without the previous fractures, which is clearly proved by the third case, the most important that I have hitherto been able to procure.

These remarks are chiefly applicable to the dorsal vertebræ, and perhaps still more so to the lumbar, which have a more substantial body than the others, with apophyses arranged vertically—that is to say, in the direction of the principal movements of which the parts are capable. Thus, it is the opinion of most practitioners that cases of luxation of the dorsal or lumbar portion of the vertebral column—characterized by a sharp angular, sometimes rectangular, and permanent curve of the parts, with or without paralysis of the lower limbs, perceived for the first time after a blow inflicted on the trunk, or after a fall, and from which the patient sometimes recovers, though the spine retains its deformity—are in reality fractures of those parts.

But if authors reject the notion of luxations of the bodies of the vertebræ, they admit, on the other hand, those of the articular apophyses, and particularly that of the atlas with the axis. In order the better to understand the mechanism of this latter luxation, I shall say a few words on the mutual relations of these two vertebræ.

The atlas is articulated anteriorly with the odontoid apophysis of the axis, and laterally with the corresponding parts of the same vertebra, having articular surfaces. The connexion of these two bones consisting only of a capsule and a transverse ligament, destined to complete the ring in which the odontoid apophysis is received, would expose them to frequent accidents were it not for a special ligamentous apparatus, extended from the occipital to the axis, and composed of the two lateral ligaments of the odontoid, and their accessory ligament, with the suspensory also, and the transverse, and, above all, the great ligament extending from the basilar apophysis to the posterior surface of the fifth vertebra. This is the apparatus which gives such strength to those articulations; this it is which confines the movements of the head's rotation within proper limits: and this, in fine, it is that, by its elasticity, prevents those articulations from solely producing flexion of the head, which is, in fact, the joint action of partial movements executed by the other cervical vertebræ.

Luxation of the atlas on the axis may take place from a violent bending of the head, or a forced rotation of the part. Always attended by compression or laceration of the spinal marrow, it is immediately mortal, and beyond the aid of art. The recorded cases of recovery from acci-

dents of this sort have been nothing more than luxations limited to the articulations of the articular processes of some of the other cervical vertebræ.

Luxation of the other cervical vertebræ is usually limited to one of the articular processes. It is often produced by too sudden a movement executed for the purpose of looking behind one. It has also been occasioned in children standing or tumbling on their head, while the neck, too weak to sustain the body, is at once twisted and turned awry, which is essential in producing this species of luxation.

The attempt to reduce luxations of this nature is very dangerous: the patient has often been seen to perish in the act, in consequence of the compression and elongation of the spinal marrow. Petit Radel saw a child die under the manœuvres practised for reduction. It is at the present day a sort of general rule to leave such luxations to themselves. The pains subside gradually; but the patients have ever after a crookedness of the neck.

The details which I have now submitted to you will enable you the better to understand the characteristic distinctions of true and false luxation, in the cases which shall presently be laid before you. We shall in the first place give some cases illustrative of luxation of the bodies of the vertebræ.

Case I.—*Laceration of the Ligaments of the Body of the Vertebræ without Luxation.—Death.*

A man, aged 50, was waiting at the end of a butcher's dray, his body fixed, his head and neck outstretched, in order to have a quarter of beef laid on his shoulders. The burden slipt from the hands of him who had to deposit it, and fell with force on the porter's neck: the man was struck to the ground at once. He was taken to the Hôtel Dieu, where I saw him next day, deprived of all feeling and power of moving the lower parts of the body. The posterior and inferior part of the neck, painful to the touch, and to the least movement, presented a considerable ecchymosis, though without any swelling; and at this part a distinct crepitation was perceived upon turning the patient's head, or when it was raised. The arms, the parietes of the chest, and the abdomen, and the lower limbs, were destitute of motivity and sensation: there was paralysis of the bladder, and retention of urine. The diaphragm, muscles of the neck, and those of the face, were alone endowed with contractile power: respiration was effected with difficulty, yet the voice was scarcely altered. This state continued for two or three days, when suddenly the respiration became extremely difficult and laborious, the pulse irregular, the eyes prominent, the skin red and livid: the man died with all the symptoms of a true suffocation.

On examining the dead body, a very large ecchymosis was found in the region of the last cervical vertebra. The intervertebral substance uniting the fifth and sixth was completely lacerated, while the bodies of those vertebræ remained quite safe. The transverse and articular spinous processes of the fifth, sixth, and seventh cervical vertebræ were broken, and a luxation from before, backwards, could be readily effected, of the upper upon the lower portion of the vertebral column. At first sight the spinal marrow seemed uninjured, notwithstanding the disorder of the surrounding parts—it only appeared somewhat more voluminous than usual; but upon slitting it in the length, the centre was found in a mashed condition, and mingled with decomposed blood.

Case II.—*Laceration of the Ligaments, with Luxation of the Body of the Vertebræ.*

A man, aged from about 40 to 45 years, working in a quarry, while he had his body bent forward, received a mass of earth on his loins, under which he fell, after having made some efforts to extricate himself. He was at first carried home, where he remained three days, deprived of all power of motion or sensation in the lower part of his body; and it was not till the fourth day that he was taken to the Hôtel Dieu. The upper part of the loins was then found to be much swollen, soft all round, while the centre of the tumor felt hard, and a distinct crepitation was perceptible. Through the abdomen could be felt another tumor, resisting at all points, running in the direction and along the line of the vertebral column. The abdomen was manifestly shortened, the base of the chest coming even as low as the crests of the ilia; there was at the same time complete paralysis of both sensation and motion in the lower limbs and the walls of the belly; the bladder, distended and paralysed, allowed the urine to overflow involuntarily. No fæcal matter was discharged, though the belly was large and soft; the pulse was small and sharp; the respiration short and difficult. The patient complained of dull pains in the dorsal region: the intellectual faculties were unimpaired. All these symptoms evidently indicated a solution of continuity, with luxation of the vertebral column. On the fifth and sixth days of the accident the palsy extended to the left arm, and the motions of the right began to be slow and uncertain. On the seventh, respiration was more difficult, and only took place by the diaphragm. The patient perished by asphyxia.

Upon opening the body, we found the

ransverse and articular apophyses of the st dorsal vertebra, and the two first lumars, broken; the body of the last dorsal, nd that of the first lumbar vertebra, separated from their processes, and from the ody of the second lumbar, had passed in ront of the latter, and rode over it, to the xtent of above an inch. The spinal marow was lacerated, and the crura of the iaphragm was torn: a large ecchymosis urrounded the vertebral column. An ttentive examination of the vertebræ hich were displaced shewed not a fracure of their body, but a laceration of their ntervertebral substance, which only in one orner had carried away a very little porion of the lumbar vertebra.

Case III.—A woman, aged 56, tall and *mbonpoint*, in coming down stairs received heavy fall, the latter and lower part of er neck striking violently against a step. She had descended twenty steps in the all, and was taken up, deprived of all ensation and motion of the parts below he neck. She suffered much in the night rom pain in the seat of the injury: her owels were not opened.

Next morning, on being brought to the Hôtel Dieu, she complained greatly of the ains in the neck, which were increased by he slightest touch and motion given to he part. The head and neck were bent orward, and a little to the right; the ower part of the neck was besides depressed, while the upper part of the back was rominent. The lower extremities, the rectum, the bladder, the parietes of the abdomen, were deprived of all sensibility; nd all was dead up to the diaphragm. Above this part, the thoracic members only laboured under a partial paralysis; respiration was frequent and laborious, but the voice, the senses, the movements of the face, and the intellectual faculties, had experienced no alteration; the pulse, also, was full and unimpaired; the tongue was dry, and a little brownish; and the skin natural, as regarded exhalation and animal heat.

From these appearances, it was not difficult to conclude that there was a serious injury of the spinal marrow, caused by a solution of continuity of the spinal column with luxation.

The patient was bled in the arm, and in the evening the respiration seemed better: the thirst was abated, and the tongue less dry; yet it was clear that no hope of recovery could be entertained. On the following night the respiration became stertorous, the voice embarrassed, the face swollen, and the patient sunk, thirty-four hours after the accident, her intellectual faculties remaining perfect to the last.

On examining the body after death, we found an ecchymosis, and bluish sugillations on the back part of the neck, a projection backward of the dorsal column, with a projection forward of the cervical at the same place. The cellular tissue and subjacent muscles were bathed with blood. The parts immediately in contact with the vertebral column were destroyed, and allowed the upper articular apophyses of the seventh cervical vertebra to be seen, whilst the sixth vertebra was perceived to be indented half an inch before the seventh. In the interval of these two bones the spinal marrow could be seen spread laterally and compressed. The spinal column, examined in front, presented a very remarkable prominence in the part corresponding with the sixth cervical vertebra, and it was enveloped in blood. The anterior ligaments of the part were destroyed, and the pharynx was lacerated.

Upon dissecting the cervical portion carefully, the yellow ligaments were found torn, and so were the anterior and posterior ligamentous envelopes, and the intervertebral substance between the sixth and seventh cervical vertebræ. This substance was ruptured in such a manner, that two-thirds of its thickness remained adhering to the seventh vetebra, while the sixth only held the remainder. With regard to the bones themselves, it was perceived that the seventh cervical vertebra was perfect in every respect; that the end of the spinous process of the sixth was slightly broken, as well as the margin of its lower articular process. All the articulations of the vertebræ above the luxation were in their natural condition; that of the seventh cervical, with the first dorsal, was much more free than ordinary.

Of the three preceding cases, the first presents an example of laceration of all the ligaments of the vertebræ and of fracture of the articular apophyses; yet without luxation: the second an instance of the same injuries, with luxation; and the third a pure and simple luxation, without any fracture of any part of those bones. In all the three cases the vertebral column received a shock while in a state of tension, which must have been augmented at the moment of the accident. There was a percussion, and not merely a distention of the part: and the determining causes of the injury were all applied to the posterior part of the vertebral column. In all the three cases, the intervertebral substance was ruptured, and the body of the vertebræ remained uninjured; but in the two first, the spinous processes and the transverse and articular processes were broken and separated from the body of the bones; whilst, in the last, all the parts remained uninjured. In the first case, the power which operated on the spinal column seems

not to have been sufficient to cause a luxation: in the second it produced laceration of the ligaments, fracture of the apophyses, and an enormous luxation in the thickest part of the vertebral column. In the third case, finally, the power produced a remarkable laceration of the ligamentous substances, and a very great luxation in causing the articular apophyses of one of the vertebræ to slide over those of the other.

In all the three cases the fatality arose from the injury to the spinal cord. All the parts below the lesion were equally paralysed, although the injury to the bones was materially different. In all the three patients, the affection which was at first limited to the parts below the injury, was soon extended upwards, till it reached the origin of the diaphragmatic nerves. The respiration, which, till then, was executed without much difficulty, became suddenly laborious, and the patients died by the successive interruption of the different respiratory phenomena. This termination, so promptly fatal, is constantly observed when the lesion has taken place above the origin of the diaphragmatic nerves; whilst life may be more or less prolonged if it have occurred below their origin: and thus we find that the position laid down by certain authors—that luxation of the bodies of the vertebræ is impossible—does not hold good. Were further proof needed, I should recommend you to look over the collections in the Museums of the Ecole de Médecine, and the Jardin des Plantes: you will there find further corroboration of the facts I have detailed for you.

Having now concluded what I had to say relative to the symptoms of luxation of the vertebræ, and the disorders arising from those solutions of continuity; and having shewn the difficulties which sometimes attend the diagnosis; I shall proceed to offer you some remarks descriptive of a complaint which, as it strongly resembles luxation of the vertebræ, has more than once deceived even clever practitioners.

CASE IV.—*Rheumatic Affection, simulating Luxation of the Cervical Vertebræ.*

A boy of 15 was brought to the hospital on the 30th of January last, by the direction of several practitioners, who advised that I should be consulted on what they conceived to be a luxation of the first vertebra upon the second. The boy, it appeared, had two days previously, in taking off his shirt, made a violent movement. He felt at the instant a sharp pain in the cervical vertebræ, and heard a distinct crackling noise; his head was turned to the left, and remained fixed there. Medical men being called in, thought they recognized an incomplete luxation of the first cervical vertebra upon the second; and, in consequence, they advised the lad to be taken to the Hôtel Dieu. Upon examining him, I found the head strongly bent to the left, with the spinous processes of the first vertebra prominent; the neck was convex on the opposite side; sharp pains were felt in the part, and were augmented on the slightest effort being made to straighten the head. The patient complained, moreover, of feeling a numbness and twitchings in the right shoulder and upper arm: he swallowed with difficulty.

Many of those who were present at this examination, participated in the opinion of the boy's medical attendants; but I had no hesitation, upon considering the case, to pronounce that it was merely an effect of rheumatism. I observed, on the occasion, that there were certainly apparent reasons for supposing a luxation, and that therefore I should explain the grounds of my opinion. I have often seen, I continued, symptoms of the same description in persons who, being subject to rheumatism, felt all of a sudden a sharp pain in the neck, from the fixation of the rheumatismal principle. Thus persons, while dancing, have been seized with a sudden pain in the calf of the leg, which by no means depends on the rupture of the gracilis muscle, as some have supposed, though the patients have been utterly incapacitated for walking for two or three days. It is not usual to find those pains, when they subside in one place, making their appearance in another. Some people, in stepping into a cabriolet, shall perhaps feel a sudden pain in the loins, or along the mass of the sacro lumbar muscles—a pain so acute that they have become alarmed, thinking they were struck with a stick, or with a sword. Now what induces me to believe that this lad's case is of a similar nature, is that he is employed in selling wine—that he is obliged to go down every day into a cellar, and remain there for several hours—and that he has had rheumatic pains. We shall cup him on the left side of the neck.

On the following day, the improvement was so great that nobody could any longer entertain a notion that there was vertebral disorder present. The patient could bend and turn his head without much difficulty. There was no longer any feeling of numbness in the right side. Nothing further was done for the patient, except to apply a few cataplasms and flannels to the part; and in a fortnight he was as well as ever, and left the hospital.

CASE V.—*Tumefaction of the Intervertebral Ligaments of the Cervical Region.*

A man came to the Hôtal Dieu, complaining of pain in the neck. He said, that in "the days" of July he had re-

ceived some blows, from the butt-end of a musket, across the head and neck; but he confessed that some months previously he had had a fall, which gave him sharp pain, but did not prevent him from work. Upon coming into the hospital, the neck was convex posteriorly and concave in front; the upper part of the cervical column was prominent, and the spinous processes could be readily felt. He could not by any means turn his head, and when he required to turn round to look at any one, he did it in such a way that it looked as if the head was soldered to the body. If he attempted to turn suddenly, he felt pain. The complaint was aggravated by work, and there was evident engorgement of the ligaments uniting the vertebræ. The cupping instruments did much good by a single application: they were tried again on the opposite side, but without equal benefit. A moxa was applied to the nape, which was so efficacious that the patient himself begged for another. A cure was effected in this way, and the man had eventually no obstruction in the movement of the parts.

CASE VI.—*Apparent Luxation of the Cervical Vertebræ—Cure.*

An old man recently came to consult me for an affection of the spinal column, which seemed, at first sight, to be a luxation. The neck was convex posteriorly, and concave in front; and so great was the stiffness of the parts that no movement could be effected. There was also observed in the vertebral column a vicious curvature, attended with pain on the least attempt to disturb the articulations. It was supposed that there must be in this part a disease of the ligaments, which, in the effort to extend them, might cause a spontaneous luxation. Leeches and emollient cataplasms were applied. Two moxas were put to the sides of the gibbosity, which succeeded in producing a decided improvement: the patient could turn his head right and left; but, for a radical cure, he was obliged to continue under treatment for a considerable time.

We shall add one other case, which, though not exactly analogous with the preceding, is still perhaps sufficiently interesting to be introduced in the present lecture.

CASE VII.—*Engorgement of the Occipital and Vertebral Ligaments—Palsy and Atrophy of the left half of the Tongue.*

A man, aged 30, whose employment it is important to notice, as it materially influenced the development of his disorder, was received in this hospital in the course of last year. He was a lace-weaver, and was accordingly obliged to work in cellars and on cold and damp ground floors. Persons of this trade are very subject to rheumatic affections, and swellings of the ligaments of the joints. Three years ago, this man was seized with very sharp pain of the left and back part of the head, which totally impeded him from moving the parts, and deprived him of sleep. In the course of five or six days they changed their position, and settled in the left side of the upper part of the neck. The pains were not now so violent, but motion of the head was still impossible. Lateral flexion of the head, it is true, was partly performed by the totality of the cervical column; and the head could, moreover, be slightly bent forward and backward by the same means. The seat of the malady was evidently in the vertebræ themselves, if it was not in the muscles—a supposition which, as we shall see, was inadmissible.

The next peculiarity observable in this case was, a difficulty of speaking; at first inconsiderable, but increasing gradually to such an extent, that, at the end of two months, the patient could not be understood. He said that the air passed by the left side of his tongue with a whistling sound, and when he wanted to say *je*, he could only utter *ze*. There were some pains at the angle of the jaw and in the cheek of the left side; but there was no paralysis of the muscles in that quarter.

Another symptom now became remarkable, The tongue began to diminish in bulk on the left side, and the diminution soon amounted to a perfect atrophy. The organ at this part appeared to be formed of nothing more than membranous folds, which could be rubbed together without feeling in any degree muscular: it felt like an empty leather purse. When the tongue was put out, its right side seemed sound enough; and the atrophy of the left, which was most visible at the end and middle portion, was inconsiderable at the base. The right side even seemed to enjoy a more than usual degree of strength and activity, as is observable in other parts of the body when the corresponding parts are paralysed. There was a curvature to the right side when the tongue was thrust out. It was only in the first months that articulation was difficult or impossible: when examined at the hospital, he could speak as well as if there had been no atrophy. This must have been the result of practice; for it is known that speech can be effected by this means with half a tongue, nay with a less portion, a third, a fourth part, and even with a stump that is scarcely visible.

I was anxious to find what changes had occurred in the sense of taste; and with this view I made four watery solutions of sugar, sulphate of quinine, common salt,

and an acid. I tried them first on the healthy subject: some of the pupils submitted to the experiment. Keeping the tongue motionless, a few drops of these solutions were applied to the tip — there was no taste perceived; they were applied then successively to the middle and to the base, when the different flavours were perfectly distinguished. Trying the same experiments on the patient, it was found that there was no sense of taste at the tip of the atrophied side; but in the middle portion, and according as the base was approached, the more acute and perfect was the sense. Thus it appeared, that though the muscles were gone, the sense of taste remained in all its perfection,—a remark of very great importance.

By considering next, what nerves are distributed to these muscles, we were still further able to form an opinion of the seat of the disorder, and the cause of the atrophy. The nerves of the tongue are the lingual, the glossopharyngeal, and the hypoglossal; the lingual being distributed to the nervous papillæ of the surface; the glossopharyngeal to the back part and lateral portions of the pharynx: the first is subservient to the taste, the second to the motions of the organ. Now the sense of taste being unimpaired, the lingual nerve was safe; and if there had been an alteration in the glossopharyngeal nerve, the functions of the pharynx would have been impaired, and the base of the tongue would have suffered more or less from the atrophy. The nerve of the ninth pair, the great hypoglossal, then remains; and it is worth while considering the origin and distribution of this important agent. It arises from filaments in the furrow situated between the corpora olivaria and pyramidalia, on the sides of the medulla oblongata, and issues from the skull by the anterior condyloid foramen, at the internal and posterior side of the foramen lacerum. The eighth pair, in like manner, passes through at the same place; but it does not appear to have been involved in this malady, for the functions of the stomach and alimentary canal remained unimpaired. The nerve of the ninth pair receives and gives off numerous branches: some of these are distributed to the muscles inserted in the hyoid bone; others supply the middle cervical plexus; and accordingly, in the present case, the left side of the neck seems to have been not so well supplied as the right. This nerve, in fine, which is the true mover of the tongue, is terminated every where in muscular parts. So much then being premised relative to the different functions of the nerves of the tongue, we shall now consider briefly whether the atrophy depended on the brain or the nerve.

The acute pains felt by the patient at the commencement of his disorder were simply external or superficial: there was no disturbance of the intellectual functions all along; nor of the locomotive functions: there has been no palsy in parts supplied by cerebral nerves. Nor does the medulla oblongata appear to be the origin of the affection, for there have been no troublesome symptoms in parts supplied from that quarter. Nor, finally, for the same reason, can the spinal marrow be supposed the source of the malady.

Taken in every point of view, the disorder in this case appears to me to result from a lesion of the nerve of the ninth pair, not within the skull, but after its departure from that cavity. This opinion seems borne out by the lesion of the occipito-vertebral articulation. The inability to execute movements of the head seems to point out some affection existing between the vertebræ, the cause of which is probably rheumatism, and the seat the ligaments. The disorder began on the left side: it descended to the neck on the same side; the *point de depart* is then between the occipital and the first vertebra, and perhaps even extending to between the first and second.

Diseases of this kind are by no means rare. There are in the collections of the Ecole and the Museum of Comparative Anatomy, ten or twelve cases of stiffness, with or without luxation, of the first vertebra with the condyles of the occipital. Thus, in the present case, there was inflammatory engagement, acute or chronic, of the ligaments uniting the vertebræ and the occipital: and as the nerve of the ninth pair passes out by the foramen in front of the occipital condyle, this nerve must have been either compressed, or altered in its tissue at the point of exit; it must, then, have become atrophied, and hence the paralysis and atrophy of the left part of the tongue.

The treatment in this case was energetic; for, as the disorder appeared to vanish from the left side, it was found to have some tendency to migrate to the right,—the patient beginning to complain of similar, though slighter, symptoms on that side. Cupping was freely practised and frequently repeated behind the mastoid processes, and moxas were afterwards employed. The results were satisfactory. I have only to add, that this case of palsy and atrophy of half the tongue appears to me to be a very important one: I have never met with another example of it; and I am not aware that other physicians have given an account of any similar complaint.

ST. BARTHOLOMEW'S HOSPITAL.

To the Editor of the Medical Gazette.

SIR,

THE following case appears to me full of interest; if you are of the same opinion, it is at your service.—I am, sir,

Your obedient servant,
W. MARTIN COATES.

St. Bartholomew's Hospital,
20th Dec. 1833.

Carcinoma of the Lip—Spreading Ulcer—Death from Inanition—Extraordinary post-mortem Appearances.

—— Pola, a Spanish refugee, was admitted into Luke's ward, May 17, 1833.

History.—Nine months ago, cancer of the lower lip commenced by a slight ulceration at the left side of the median line; and about three months previous to his admission, a portion of the lower lip was removed by operation. The wound had almost healed, when a small ulcer made its appearance at the lower extremity of the cicatrix, at about an inch and a quarter to the left side of the symphysis, and midway between the alveolary edge and base of the lower jaw. This ulceration had gradually increased to its present size.

Symptoms on admission.—At the lower end of the cicatrix resulting from the operation, was an ulceration, about half an inch in diameter, which had completely perforated the cheek opposite the first or second molar tooth. The glands in the neck were enlarged, red, and painful; and the discharge from the wound was thin and very offensive. His general health was good, though his complexion was sallow. His pulse was slow and feeble, but regular.

As the state of the case put out of the question any idea of an operation, conium and other remedies said to be useful in this disease, were exhibited with but little benefit,—nothing appearing to relieve him so much as the internal administration of opiates. The ulceration continued to spread, extending upwards to within an inch of the zygoma, downwards an inch below the base of the inferior maxilla, and laterally to the angle of that bone. Portions of bone were destroyed and thrown off, and several teeth were loosened, so as to render their removal easy with a pair of dressing forceps.

About three weeks previous to his death, the ulcerated edges looked healthy, the discharge greatly diminished, and his appetite returned; but this effort of nature to effect a cure was the immediate cause of his death; for the contraction consequent on the attempt at cicatrization, caused such strangulation and swelling of the anterior third of the tongue, as totally to preclude the possibility of his taking nourishment by the mouth, and he obstinately resisted any attempt on our part to nourish him in any other way.

This cutting off of supplies of course soon killed him.

He died, December 16th, never having had any symptoms indicating disease of the thoracic or abdominal viscera, except a smart attack of constipation and pain of the bowels, attributed to the opium he was taking, and which were quickly relieved by removing the cause, and the exhibition of purgatives.

Post-mortem examination.—In addition to the above-mentioned loss of integuments of the lip and cheek, the left half of the lower maxillary bone was completely destroyed, with the exception of the condyloid and coronoid processes: the edges of the portions of bone were rough and diseased. The left side of the tongue was ulcerated, and the anterior third so swollen as to fill completely the opening of the mouth. The alveolar plates of the superior maxilla, forming the sockets for the first, second, and third molares, were superficially ulcerated externally. The glands in the neck were merely hardened, being apparently in the first stage of carcinomatous degeneration.

The common tubercles of phthisis were found in the upper lobes of both lungs, and in one a small cavity.

In the liver there were three tubercles, half an inch in diameter, and truly schirrous.

The heart afforded the most interesting appearances. In the walls of the right auricle, right ventricle, and left auricle, were numerous depositions, purely carcinomatous, varying from the size of one to that of two peas, some being situated between the pericardium and muscular structure, and others in the latter substance itself. At the bases of the musculi pectinati of the right auricular appendix, there were several small warty excrescences. A structure of similar texture to those found in the liver, walls of the auricles, and right ventricle, occupied the situation of upper two-thirds of those of the left ventricle, whose walls were upwards of an inch thick. A portion of the same matter passed down to the apex, between the pericardium and muscular substance; and a tubercle of it was discovered underneath the lining membrane of the left ventricle, of the size of a horse-bean, among the carnæ columnæ. Several others were scattered about the walls of the same ventricle. The surface of the inner tunic of the ascending aorta was raised by minute, white elevations; and at the junction of the ascending and transverse portions, there was underneath

the inner coat a lamella of bone, half an inch in diameter each way.

The pericardium was adherent throughout.

The other viscera were healthy.

This case is not only interesting as an exception to the general rule—that cancer of the lip is a local disease, but as an instance of an exceedingly rare morbid appearance, namely, carcinomatous degeneration of the muscular structure of the heart. Again, is it not remarkable that with all this disease of that organ, there should have been no derangement of the circulation?

PERIODICAL APHONIA.

A PEASANT girl, twenty-four years old, had become hysterical immediately after marriage, two years previously. At one period she became cataleptic, and at another had laboured under all sorts of hysterical convulsions, which were not in the slightest degree alleviated by medical treatment. At last her cure seemed to take place spontaneously, and she remained several weeks in apparently good health, when she was attacked with a new malady. Speechlessness now came on every day at four o'clock, P.M., accompanied with a feel of weight about the root of the tongue, and lasted about a quarter of an hour. The tongue was clean and natural in appearance; the pulse, during the paroxysm, was small, hard, and slow; the features unaltered; the heat of skin natural, and perspiration regular. The patient, while it lasted, could not utter any articulate sound, but occasionally made an indistinct hissing noise; consciousness did not appear at all impaired during the fit, and she ascribed her inability to speak to a feeling of weight in the tongue. The paroxysm went off with a large evacuation of watery urine, accompanied by perspiration and sleep. Ten such attacks had occurred when Dr. Richter, of Wiesbaden, was called to see her. He ordered her considerable doses of sulphate of quinine, with immediate good effects; for on the first day the attack returned, but in a mitigated form, and on the second day no trace of it was visible, except a certain degree of debility and fatigue felt at the usual hour of its coming on.

I have no doubt that this was a variety of febris intermittens apoplectica.—*Hecker's Medical Journ. and Dublin Journal.*

LONDON HOSPITAL.

Mr. Blizard Curling was elected to the Assistant-Surgeoncy of this institution, on Wednesday last, by a large majority.

NEW MEDICAL WORKS.

A Demonstration of the Nerves of the Human Body. By Joseph Swan. Part IV. (completing the work), The Spinal Nerves. Elephant folio, 4*l.* 4*s.*

The Parent's Dental Guide. By W. Imrie. 8vo. 5*s.* bds.

LITERARY INTELLIGENCE.

Dr. Wilson Philip has in the press a work "On the Effects of minute Doses of Mercury, in combination with the Appropriate Treatment of various Diseases, in restoring the Functions of Health."

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Jan.* 7, 1834.

Abscess	5	Inflammation	26
Age and Debility	31	Bowels & Stomach	2
Apoplexy	7	Brain	9
Asthma	20	Lungs and Pleura	10
Childbirth	3	Influenza	1
Consumption	57	Insanity	1
Convulsions	26	Liver, diseased	7
Croup	1	Measles	14
Dentition or Teething	8	Mortification	6
Diarrhœa	1	Paralysis	2
Dropsy	14	Rheumatism	1
Dropsy on the Brain	10	Scrofula	1
Erysipelas	1	Small-Pox	7
Fever	8	Sore Throat and Quinsey	1
Fever, Scarlet	8	Thrush	1
Fever, Typhus	2	Unknown Causes	4
Heart, diseased	1		
Hooping-Cough	7	Stillborn	21

Increase of Burials, as compared with the preceding week . . . 45

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Jan. 1834.	THERMOMETER.		BAROMETER.	
Thursday . 2	from 34	to 42	30·11	to 30·28
Friday . . 3	36	49	29·95	29·80
Saturday . 4	39	49	29·81	29 91
Sunday . . 5	36	50	29 92	29·83
Monday . . 6	39	51	29·76	29·46
Tuesday . . 7	35	47	29·50	29 52
Wednesday 8	36	46	29·25	29·21

Prevailing wind, S.W.

The 2d clear, otherwise cloudy; frequent heavy rain on the 3d, 6th, and 8th.

Rain fallen, ·275 of an inch.

CHARLES HENRY ADAMS.

NOTICES.

DR. KERRISON.—We should publish the vile letter of "O. P." without hesitation, were we not of opinion that the writer's object would only be promoted by our so doing. Dr. K. acted very properly in returning so prompt a reprimand.

We have to apologize to several correspondents for the temporary postponement of their papers.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 18, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XV.

DEMONSTRATION OF THE GRAVID UTERUS.

Contrast between the unimpregnated and gravid uterus. — When we contemplate the unimpregnated by the side of the gravid womb at the end of gestation, we should be inclined to doubt—from the very extraordinary alteration that has taken place during the period of pregnancy—whether in reality they were not two perfectly distinct organs. We observe, then, an amazing difference in almost every attribute—in FORM, SIZE, SITUATION, TEXTURE, POWER, AND CONTENTS.

With regard to its *form:* I have already described the virgin uterus as being of a triangular shape, somewhat like a flattened pear; on the contrary the gravid womb, at full time, is nearly oviform.

In *size*, we ascertained that the unimpregnated uterus did not measure more than three inches in length, and two in breadth; but we find, during pregnancy, it has increased in volume to so surprising a degree, that, at the end of gestation, it is about thirteen inches long and eight or nine broad.

We have seen, in *situation*, the unimpregnated uterus occupying a portion of the pelvis, between the bladder and the rectum, sustained in its position by ligaments passing from its sides to the pelvic and lumbar bones; on the contrary, the gravid uterus has become an abdominal viscus; and of this cavity it fills a very large portion, distending the abdominal parietes, which support it anteriorly, while it rests below on the pelvic brim.

The *texture* of the unimpregnated uterus was described as being close, tough, dense, firm, and inelastic; whereas the structure of the impregnated uterus is loose, spongy, and distensible, as you may observe in these sections of the organ, capable of being drawn out to a considerable extent between the fingers without laceration of its substance. The looseness of its texture depends on the increased size which the vessels have assumed during utero-gestation, and which we have already observed to be enormous—most extraordinary, indeed, in their calibre, in comparison to what they were in the unimpregnated state.

The unimpregnated uterus possesses no *power* but that of secreting and conceiving; the gravid uterus possesses the power of affording lodgment to the embryo, nourishing, and eventually expelling it.

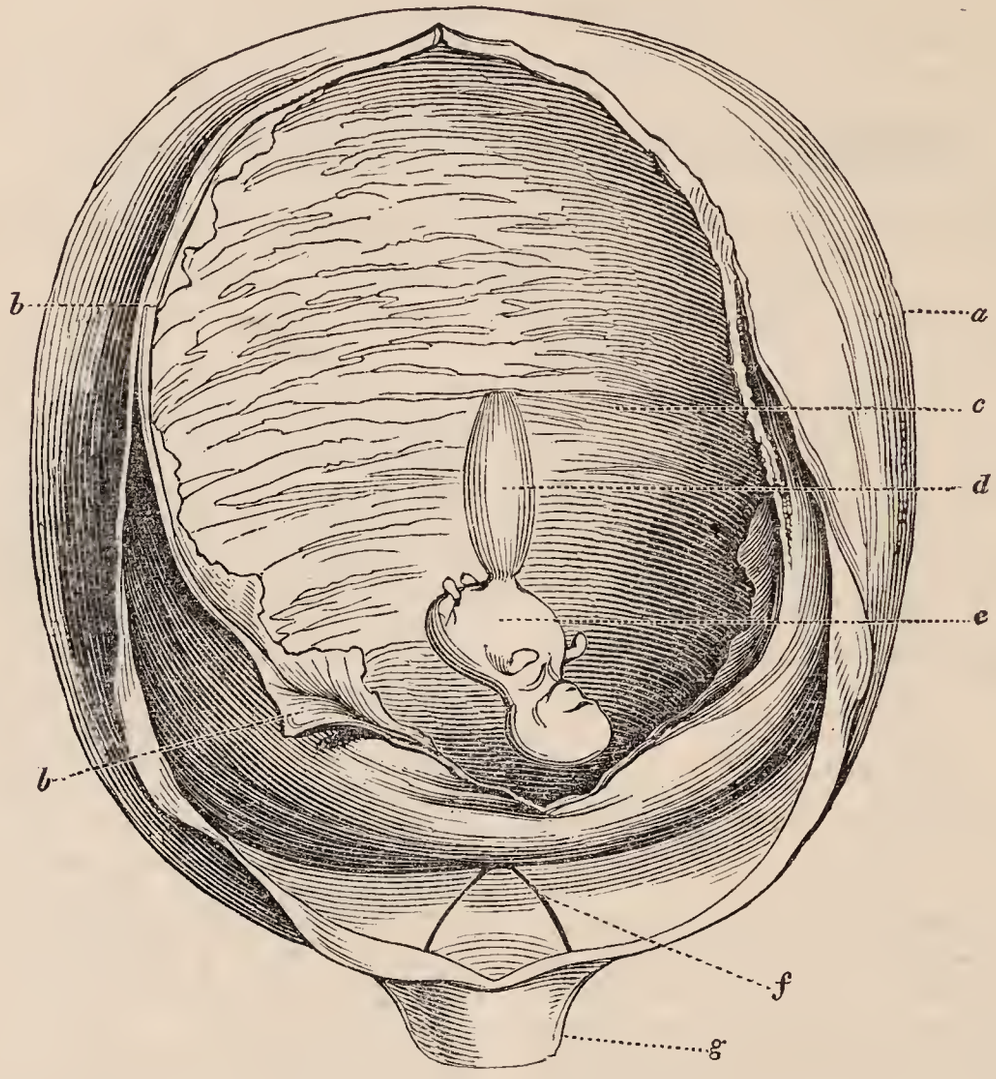
We have described the unimpregnated uterus as possessing a cavity, communicating by an open mouth with the vagina below, having therefore, properly speaking, no *contents;* while the gravid uterus contains the membrana decidua and the ovum; which latter consists of the chorion, the amnion, the liquor amnii, the placenta, the funis umbilicalis, and the fœtus.

MEMBRANA DECIDUA.

When we cut through the gravid uterus, after having completely divided the parietes, we first come to an opaque membrane lining the organ throughout its whole extent, somewhat of a reticulated appearance, divisible into two layers, both together being, at full time, not thicker than the nail, possessing a tenacity between true and false membranes, and very vascular, called after Hunter the *membrana decidua*, or *caduca*. These terms were applied

to it because it is shed from the uterus immediately after labour, or flows away with the lochia.

As this membrane has much engrossed the attention of physiologists lately, I must be excused if I dwell rather longer on its properties than is my custom. Its two laminæ are very beautifully displayed in this ovum [presenting it] of about eight weeks intra-uterine age — the external,



a, Decidua *vera*, or *uteri*; *b*, decidua *reflexa*, or *ovuli*; *c*, amnion; *d*, funis umbilicalis; *e*, embryo; *f*, a bristle introduced to keep the two layers of the membrana decidua separate; *g*, prolongation of the decidua uteri into the neck of the womb.

In this specimen, the inner layer of the decidua forms a perfectly shut sac, and there is no appearance of any prolongation of the outer layer into either fallopian tube.

commonly denominated *decidua vera*, and the internal, *decidua reflexa*.

It is rough on the side by which it is attached to the uterus, and smooth on that next the ovum; so glossy, indeed, that it might be supposed to possess a serous surface; this opinion, however, has been refuted by Breschet, who, after repeated and patient dissections, has never been able to discover any structure in the decidua analogous to serous membrane. It lies in contact with the internal surface of the uterus, throughout the whole extent of that surface, passing between the uterus and placenta. Drs. Hunter, indeed, and Baillie, describe the two layers of decidua as splitting at the edge of the placenta, and receiving the placenta betwixt them; so that one passes between that mass and the uterus, while the other is interposed between the placenta and the chorion Blundell also adopts the same view, and enforces it by reference to preserved specimens. I have never observed this arrangement in any fresh placenta, and have great doubts of its existence; as the three membranes shewn by Blundell, covering the fœtal face of the placenta, may possibly be the amnion and chorion alone, which latter is said to be sometimes formed of two layers.

It is a product of the uterus, does not originate in the ovum, and has nothing to do with the ovum except as an uterine formation, the consequence of pregnancy. We know this to be the case, because, in extra-uterine gestation, although the ovum has never entered the uterus, we invariably find the decidua formed within the uterine cavity; so that it cannot be a product of the

ovum, or a part of the ovum itself. Most writers, indeed, on the anatomy of the gravid womb, state that the decidua is *very generally* found in the uterus in extra uterine conceptions, thus leading us to infer that it is not *invariably* so. As far as my observation, however, has extended—and I have had many opportunities of ascertaining the state of the parts after death under this singular deviation from nature's institutions—the decidua in every instance has either been perfectly demonstrable in the uterus, or thrown off previously to death, by uterine contractions; and I have no doubt, if every inquiry were conducted with sufficient care, that this would be found universally the case.

There is much diversity of opinion as to the mode in which the two layers of the deciduous membrane are formed. Some physiologists, indeed, actually deny its being a double membrane at all. Thus Dewees speaks in language which cannot be misunderstood, when he says, "We have no faith in the decidua being a double membrane; at least, we have never seen it such; and of course, until we do, we shall admit it with great caution, the more especially, as it does not appear necessary to the explanation of this subject—1st, because a work of supererogation would have been performed, in making two layers of it, when one would appear to be all that is necessary; and 2d, because if we believe in its being a single membrane, the explanation is easy, and it is in entire conformity with the anatomy of the ovum, as presented to us by dissection." The assertion contained in the latter part of the sentence is completely disproved by the preparations just sent round; and with regard to the opinion in the former, I can characterize it no otherwise than as an assumption contrary to facts, and to the observations of the most persevering and erudite physiologists; by arrogating which he attempts to lay down laws for nature's guidance, and to twist the œconomy of her measures into accordance with his own speculations. My friend, Dr. Granville, in a splendid work on Abortion, lately put forth—the illustrations of which have rivalled, or even excelled, any efforts of a similar character that the boasted superiority of continental artists has achieved—utters the same sentiments. He calls the decidua reflexa "an imaginary membrane;" and in another sentence unequivocally states "there is no such thing as a decidua reflexa." He then notices, with commendation, Dewees's opinion just quoted, and appeals to preparations for the truth of his arguments. If the Doctor merely cavils about a term, I would not venture to enter the lists with him; but if he means to assert that there are not two laminæ of opaque membrane, the one lining the uterus, the other investing the chorion, I would refer again to the two specimens before you, and throw my own personal experience into the scale.

Much confusion has arisen among modern physiologists by the multiplication of terms used to designate the decidua: thus Chaussier calls it the *epichorion*, from επι and χοριον, *secundinæ*; Dutrochet the *epione*, from επι and ωον, *ovum*; Breschet the *perione*, from περι and ωον; and Velpeau the *anhiste*, from α, priv. and ἱστος, designed to signify an inorganic substance; for the last-named physiologist denies its organization at any period of pregnancy. I see no reason to change the original name given to it by Hunter; but would certainly prefer Dr. Lee's division into *decidua uteri* and *decidua ovuli*; because such a nomenclature merely describes the relative situation and connexion of the two laminæ, and does not necesarily implicate the mode of formation, or any hypothetical conjecture.

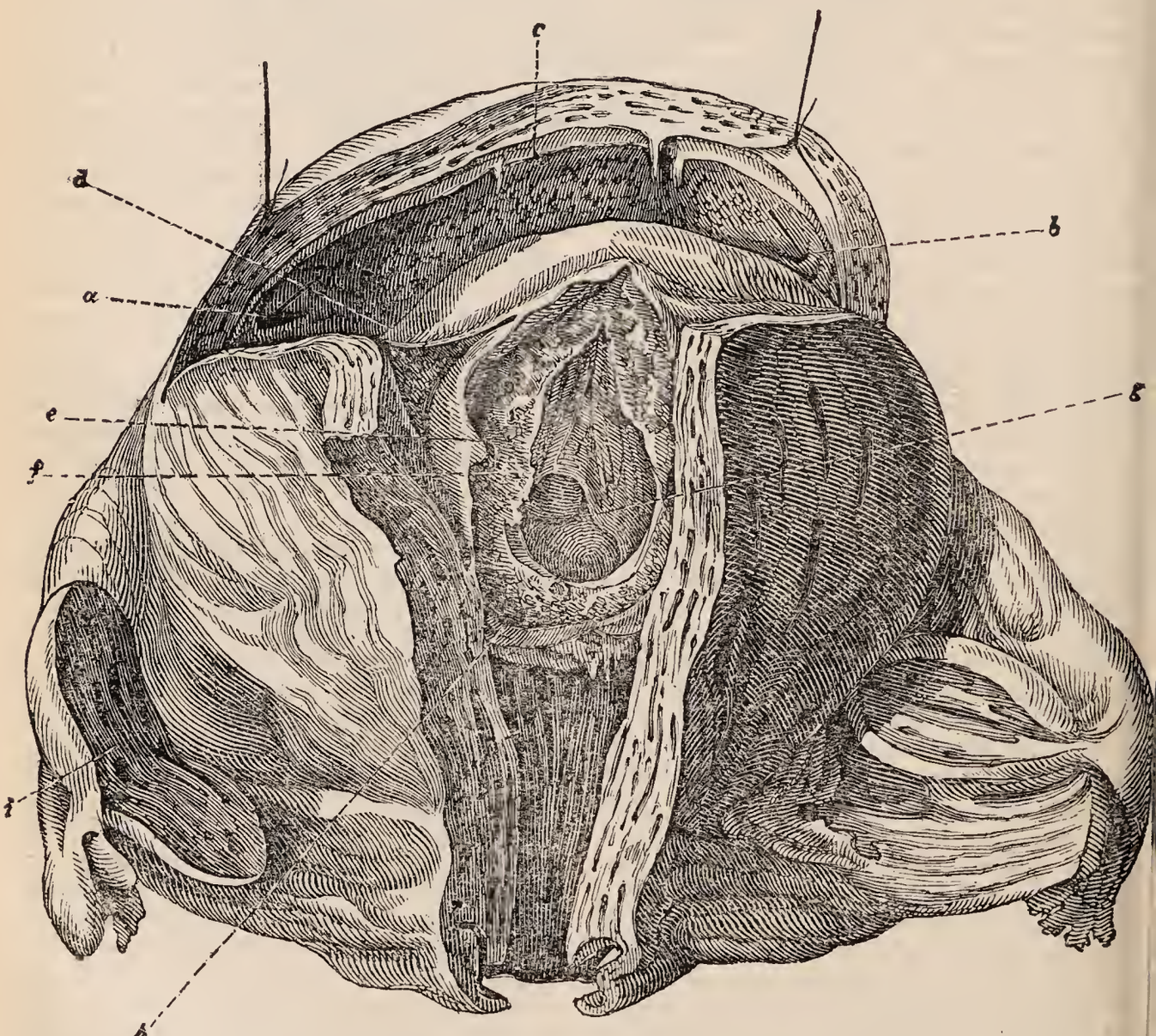
We have already seen that the decidua is, properly speaking, a product of the uterus, and that its formation is begun by the uterine vessels before the descent of the ovum into the uterine cavity. At first it appears as a gelatinous fluid; it afterwards assumes the characters of perfect, organized membrane. The production of the double layer was believed, by Hunter, to be the effect of the following process. He supposed, that on the impregnated ovum arriving at the uterine extremity of the fallopian tube, it meets with resistance from this membrane lying stretched across the mouth of the tube; that in its descent into the cavity, it carries the membrane before it, doubles it upon itself, and thus forms two layers from the original single one. The same explanation is offered by Professor Burns; who lays down, with almost mathematical precision, the presumed changes that the gravid uterus, in early pregnancy, undergoes. Nearly analogous, also, are the doctrines recently advocated by Breschet; who differs only in the opinion that the ovum does not push any portion of the membrane before it—believing it to be too minute to effect such a propulsion—but thinks that its continuance at the uterine aperture of the tube excites the arteries to a more copious secretion of the plastic matter of which the membrane is composed at this particular point; that thus fresh membrane is formed as the ovum progresses, until, at length, it is sufficiently extensive to cover the whole external surface of the chorion; no part of the first formed membrane quitting its original attachment. Dutrochet and Velpeau have both embraced somewhat similar views. These speculations have been

answered by an appeal to facts; and it has been stated on the one hand, that a prolongation of the membrane is frequently found lining each tube, to a certain extent, from the uterine extremity—as, indeed, is noticed by Velpeau, Burns, and Hunter himself:—and on the other, that the outer layer is always pervious, opposite to the ends of each fallopian tube, as well as at the cervix: neither of which peculiarities in structure could occur if the inner membrane was merely a reflected portion of that attached to the uterus. However ingenious Hunter's suggestion may be, it certainly does not seem a probable conjecture; and most physiologists of the present day have rejected it.

I have had numerous opportunities of examining ova which have been expelled entire, previously to the completion of ten or eleven weeks from impregnation; and I should certainly be inclined to the opinion entertained by Chaussier and Dr. R. Lee, that the inner is not a reflected membrane, but is formed contemporaneously with—or, I suspect, even prior to—the outer layer. Believing that the deciduous membrane remains still in its gelatinous state, until after the reception of the ovum into the uterine cavity, I suppose it becomes consolidated by a process similar to what occurs in the transformation of coagulable lymph into membrane; and that the outer layer is *afterwards* secreted by the uterine vessels, being first in a fluid state, and subsequently becoming perfectly solid.

I do not offer this explanation, however, on any other ground than conjecture, and cannot help exclaiming, with Meckel, "Il n'est pas très facile d'expliquer le mode de formation de la caduque reflechie."

In the fresh ova that have come under my inspection, I have been able to distinguish, not only the double membrane (the layers of which are both much thicker in early pregnancy than at an advanced period), but have found a mass of half coagulated blood placed between them, in much greater quantity towards the fundus uteri than at any other part. These observations perfectly accord with the descrip-



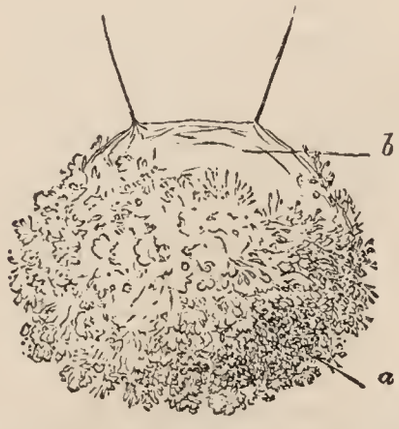
a, The uterine extremity of the right fallopian tube, described as being pervious; *b*, the left ditto; *c*, decidua uteri, or decidua vera; *d*, decidua ovuli, or decidua reflexa, "covering the unattached part of the ovum"; *e*, the decidua uteri passing between the ovum and uterus; *f*, chorion; *g*, amnion; *h*, rudiment of placenta crossing the cervix uteri.

tion given by Dr. R. Lee, in the 17th volume of the Medico-Chirurgical Transactions, of an uterus in the second month of pregnancy, which he very carefully examined. He describes a cavity formed between the two laminæ of decidua at the fundus uteri, of considerable extent, filled with a red-coloured serous fluid. A copy of the engraving accompanying the case, I now shew you.

Breschet has also noticed the same cavity, describes the fluid contained in it as "sero-albuminous;" and gives it the name of *hydroperione*.

As gestation advances, this intervening blood, whatever may be its office, appears to be absorbed: the two laminæ thus come into immediate contact, and resemble, towards the termination of pregnancy, a single membrane, being only separable by a careful dissection.

The membrana decidua appears to be of very little service towards the close of pregnancy; its principal use is confined to the early weeks. It would seem that through its means the ovum is nourished previously to the elaboration of the placenta; for before the placenta is formed, those vessels called the *shaggy chorion*, which you see in this preparation encircling the ovum at al-



a, The filamentous vessels, more numerous at this particular spot than at any other part of the ovum; *b*, the chorion, transparent, and almost free from vessels.

most all points, shoot into the deciduous membrane, so as to form a perfect medium of communication between the mother and the embryo.

CHORION.

Having cut through the two layers of decidua, we next come to the external membrane of the ovum—which is called the *chorion*; a thin, glistening, transparent membrane—much resembling the delicate serous tissues—very tough for its tenuity—enveloping the ovum—forming its external covering—and in contact with the membrana decidua throughout its whole extent, except where the placenta intervenes between them;—giving a coat to the fœtal face of the placenta, and also to the funis umbilicalis. It is said, by Granville, to be divisible into two layers; but this separation I have never been able to effect. In the human subject it contains no blood-vessels evident to the naked eye; though we cannot deny its vascularity, since it has been injected in some of the mammalia, and is said to be obnoxious to disease: Granville, indeed, on the authority of Meckel and his own, describes "vascular trunks meandering between its two laminæ." It is a part of the ovum; because, in extra uterine pregnancy, we find it—not in the uterus, as is the case with regard to the deciduous membranes—but enclosing the embryo itself. Its use is to envelop the ovum, and in conjunction with the amnion (which I shall next describe), and the liquor amnii, to form a soft wedge in labour, for the purpose of dilating the parts with the least possible injury. Granville assigns to the vessels of the chorion an office of nutrition during the first few days of pregnancy. He says, "these facts, demonstrative and corroborative of the vascularity of the chorion, explain and account for the reality of that self-existing life principle inherent in the fecundated ovum, which detaches it from its nest, enables it to travel through the tube, to grow and expand while thus travelling, and to maintain that same power of growth and development for a short time after its reception into the womb, until its final and effectual implantation on the maternal stock." I have already, you will recollect, expressed my belief that the ovum does not increase in size during its transit through the tube.

AMNION.

Having divided the chorion, we next meet with the amnion, another very thin membrane, in structure and appearance very similar to the chorion, perfectly transparent, and exceedingly tough; indeed, so like the chorion, that it is impossible to distinguish the one from the other. These two preparations [exhibiting them] are specimens of the membranes, and I only know which is chorion and which is amnion, by having put them up myself. As is the case with regard to the chorion, no red vessels are discernible circulating over this membrane, but it also must possess vascularity, because it, like its twin sister, becomes thickened by disease; and it enjoys the power of secretion, as we shall immediately see, in a considerable degree. It runs, in contact with the chorion, through its whole extent, except at a small part close to the placenta, which is called the *processus infundibiliformis*. According to Meckel and Granville, it is connected to the chorion by small fibres or filiform ves-

sels, with which the internal surface of the chorion is abundantly furnished. Hunter again states, that these two membranes adhere together by means of an intermediate, transparent, gelatinous substance, of which there is sometimes a tolerably thick stratum. "This connecting medium," says he, "appears to be neither fibrous nor vascular, and is so tender, that the least force or rough handling separates these two membranes, even when most recent. On the navel-string the amnion adheres intimately to the subjacent parts without the intervention of such a jelly, except just near the placenta; there for an inch or two the amnion comes off from the navel-string as easily as from the placenta or chorion." This representation appears to me much more just and accurate than the vascular communication already described. It gives an external coat to the fœtal face of the placenta, and also to the funis umbilicalis. On dividing the navel-string, we find the chorion between the amnion and the proper substance of the funis itself. The placenta and funis umbilicalis, then, may be said to be behind the amnion and chorion, in the same way as the bowels are said to be behind the peritoneum. Its use is exactly analogous to that of the chorion, so far as affording a covering to the ovum; but it possesses a distinct office in the secretion of the liquor amnii, next to be described. Granville, on the authority of Velpeau, states, that the amnion does not exist before the twelfth day, when it may be distinctly seen; and "is not a concentric membrane within the chorion, but a vesicle, on the outside of which the embryo rests, as on a bed," being attached to it by a cellular transparent membrane. From that time till the sixteenth day the embryo progressively gets into the cavity of the amnion. This description is at variance with every previous theory, which all suppose the amnion to be formed as early as any other part of the ovum.

It is worthy of remark, that these conjoined membranes do not always possess the same degree of toughness; for we observe them under labour sometimes so exceedingly tender, that they break on the very first accession of pain; while at others their firmness has been so considerable, that they have never ruptured at all; but the ovum has been expelled entire, even at a very advanced age. Nor do they increase in density and strength relatively as the progress of gestation advances; for even during the first few weeks they resist the application of moderate pressure; and at five or six months are often found as strong as they usually are at the expiration of the whole period.

LIQUOR AMNII.

When the chorion and amnion, as well as the two layers of the decidua, are all divided, we penetrate into the centre of the ovum, and the *liquor amnii* oozes out. This is the name given to the waters surrounding the fœtus, placed between its body and the sides of the uterus, and in which, in the earlier stages, it floats. The liquor amnii varies exceedingly, both in its quantity and properties:—in quantity, from a few ounces to the amount of a gallon or more:—in properties, from being perfectly transparent, pellucid, almost tasteless and inodorous, to a thick, somewhat viscid, dirty fluid, almost as dark as coffee, and occasionally of a putrid odour. The usual appearance of the liquor amnii, however, is that of rather dingy water, of a slightly greenish or yellowish cast. Its principal constituent is water containing some of the salts,—the muriate of soda particularly,—and a peculiar acid, known by the name of *amnic* acid. A very small quantity of albumen is sometimes discoverable by its becoming opaque and muddy on the application of heat. In the early months of gestation, the liquor amnii, as you have already learned, bears a large proportion to the size of the ovum. Here [presenting it] is an ovum so young that you cannot discern any embryo, and yet there is a drachm or more of liquor amnii. In this other preparation, where the fœtus is the size of a small kidney bean, you might have collected an ounce and a half of fluid: whereas, during the last weeks of utero gestation,—when the fœtus weighs about seven pounds,—the membranes do not contain generally more than from a pint to a quart. It decreases *relatively* as the fœtus grows, although in *actual* quantity it is constantly increasing. There is positively more at the end of gestation than at four months; but in proportion to the size of the fœtus, very considerably less.

How formed.—The origin of this aqueous fluid has given rise to some controversy. It has been regarded as an excretion from the fœtal system; either urine or perspiration. It is impossible that it can owe its formation to any organ of the fœtus, because we observe it, as in the specimens sent round, before any embryo is visible; and its relative proportion to the size of the fœtus, through the whole period of gestation, would also discountenance the idea. Again: Haller supposed it a specific secretion from the uterine vessels; but in extra uterine conception we find it encircling the fœtus, and not contained in the uterus. There is now no question that it is a secretion or exudation from the inner surface of the amnion, supplied by innumerable small colourless vessels, which have

been described as traversing that membrane.

Use.—Nor have its intention and use been a less fruitful ground of dispute. Thus it was for a long while supposed to be for the purpose of nourishing the fœtus; and Dr. Darwin particularly has revised this old idea. He says, calves have been found at birth with hairs in their stomach; and he supposed these hairs had dropped off from their own coat while in utero, and were swallowed with the liquor amnii. Heister says he found an icicle in the mouth of a calf, extending down its throat, in the case of a cow destroyed by excessive cold while calving; and he thought it was frozen while the calf was sucking it down. But if this proved any thing, it would only be the expanding force of freezing fluids. It is highly unphilosophical to consider it intended for the nourishment of the fœtus; because we can assign other most valuable uses to it;—because we have no need of its agency in this respect, since there is a regular system of vessels through which the means of increase can be supplied;—because it is sometimes perfectly unfit for food, being turbid, and occasionally putrid;—and because, by analysis, we find that it contains no nutritive properties; or, if any, a very inconsiderable quantity. Besides, children have sometimes, though rarely, been born with the œsophagus imperforate; such a fœtus could not have obtained nutriment through the medium of the stomach. Such irregularities in conformation induced Lobstein to suppose that the nutritive matter was taken in by absorption through the skin. This cannot, however, well be the case; for independently of the sebacious matter with which the skin is often thickly covered, and which I should presume would prevent absorption, the fluid is itself a secretion from the inner surface of the amnion, which is, as it were, an extension of, or at least a continuous surface with, the skin of the fœtus; and supplied, indeed, by fœtal vessels.

Its true use appears to be to defend the young embryo in the early weeks of pregnancy from the pressure of the uterine parietes; and that is the reason why it then occurs in such a large quantity;—to keep up, by means of its badly-conducting power, an equable temperature and warmth in the fœtal body throughout the whole of gestation; and to allow free motion to the limbs of the fœtus, so as to prevent their being cramped or distorted, particularly towards the close of pregnancy. Besides these advantages, we find it of the most essential service in labour; for—contained within the amnion and chorion—it forms a soft bag, which, acting as a wedge, dilates the os uteri, opens the vagina, extends the external parts, and prepares the way for the passage of the child. Even after the membranes are ruptured, its value is still apparent in the lubrication it affords to the vagina and external parts.

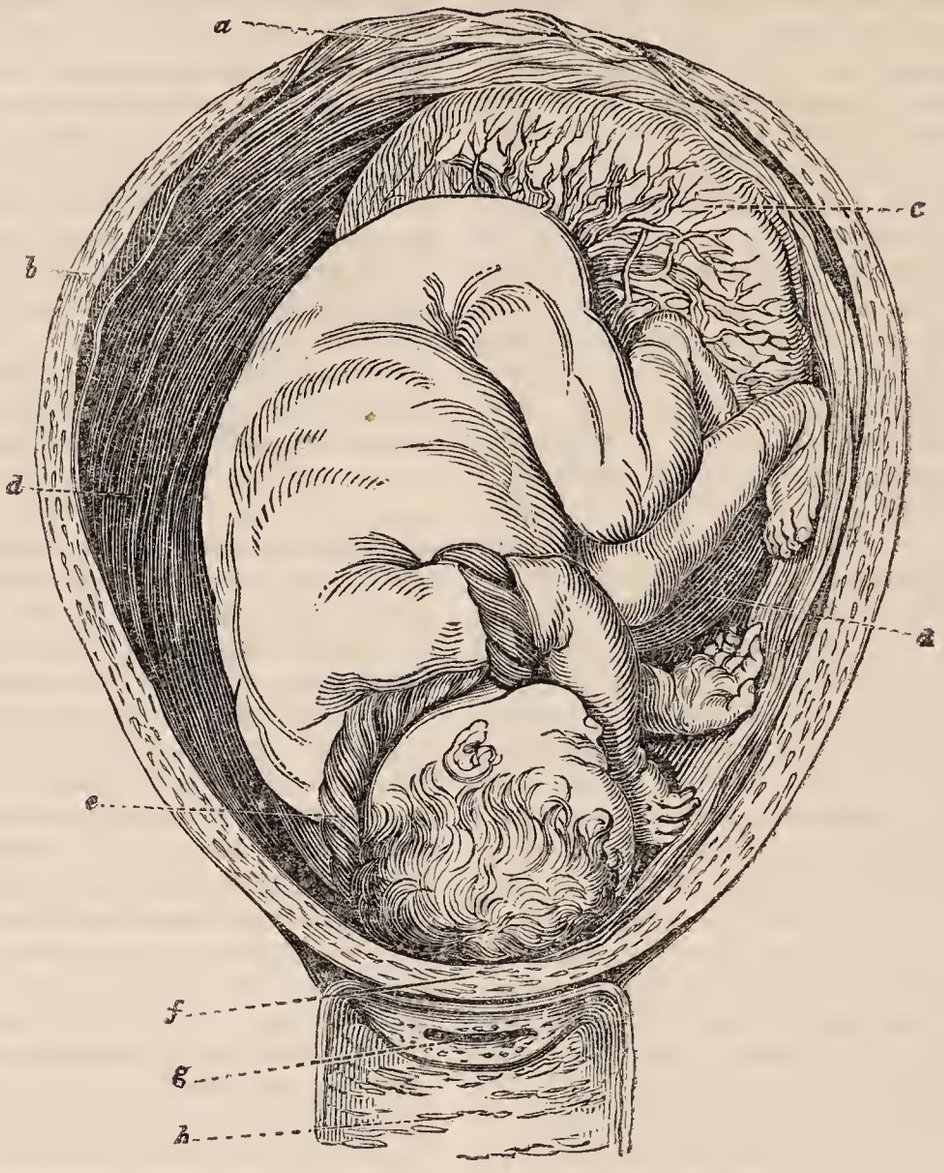
As our time will not admit our now going into the physiology of the placenta, we shall reserve a description of that organ for the next lecture, and proceed to the consideration of that most important ingredient in the formation of the ovum,—for whose preservation, protection, and growth, all the other parts are elaborated, and to which they are all contributory and subservient—the essence of the whole—

THE FŒTUS,

as placed *in utero*. The position in which it lies is the most easy, as well as compact, that could possibly be devised for a body of such size and irregularity. It occupies much less space than we should suppose it it could be packed in. Its general figure is that of an oval; the long diameter being placed nearly perpendicularly with regard to the trunk. The head is situated towards the os uteri, the vertex being the most depending part; the chin is pressed upon the chest; the neck and back are bent into a curve; the nates lie at the fundus uteri; the thighs are bent up towards the belly, and the legs turned back somewhat on the thighs; the arms are crossed upon the chest, or one hand is placed by the side of the head and the other on the chest, or by the breech, and sometimes both lie by the side of the head;—thus one end of the oval is formed by the vertex, and the other by the breech, as represented in these specimens of gravid uteri on the table; also in this accurate cast, modelled from Dr. Hunter's plate; and this engraving of Smellie, which I proceed to demonstrate. If the fœtus, at full maturity, weighs, as it does on an average, about seven pounds, and we allow one pound and two or three ounces for the placenta, funis, and membranes; the contents of the gravid uterus will be between nine and ten pounds; but will vary much, according to the quantity of liquor amnii.

When the uterus contains twins, they are usually represented as placed with the head of the one presenting and the breech of the other: but this is by no means uniformly the case; nor, indeed, in my opinion, generally: for—from a very accurate register, embracing nearly 14,000 cases which have occurred in the Royal Maternity Charity, since the beginning of the year 1828, under my own immediate superintendence—I find that the twin cases in which both heads presented are, in the

proportion to those in which the presentation was head and breech, very nearly as three to two; and that the cases in which both children presented by the breech, or



b, The parietes of the uterus divided; the dark spots are intended to represent the cut arteries and veins. *a*, The membranes of the ovum turned over the surface of the fundus uteri. *c*, The placenta, attached to the back part of the body, towards the left side. *d*, The cavity of the ovum laid open. *e*, The funis umbilicalis, twisted round the neck and arm; this is not usual. *f*, The cervix uteri, perfectly developed. *g*, Os uteri, displaying its glands, as enlarged under pregnancy. *h*, Vagina.

the one by the breech or head, and the other transversely, are about one to sixteen. According to the same register, the proportion of twin to single births is about one in eighty; and, in about four cases out of five, the twin children have been of the same sex. When the case is one of triplets, we might expect to find the head of one presenting, the breech of another, and the third lying across at the fundus uteri; at least, in three cases which I have personally witnessed, this has been the situation. The proportion of these cases of plural births may be about one in 12,000. Twins are not usually so large individually as single children, but together they weigh more. Dr. Clarke's calculation gives us about eleven pounds and a half the pair. Besides the three cases of triplets, I have personally known one of quadruplets; which are exceedingly rare. Dr. Hull, of Manchester, met with a case in which there were five children at a birth, thrown off prematurely: they all five together weighed about eleven pounds and a quarter. These fœtus are preserved in the Museum of the College of Surgeons in this city, and the preparation was put up by my friend, Mr. Barlow. I believe this is the only well-authenticated case of the kind on record.

CLINICAL LECTURE

ON

FRACTURE OF THE SKULL.

Delivered at the Middlesex Hospital,

By Sir Charles Bell.

[Continued from p. 493.]

I shall not say a word upon the dissection before you (that of a leg which had been amputated the day before, for a tumor of malignant growth in the tibia), because I will not break the connexion of the lecture; but I beg you to look at it to-day, and on another occasion I will offer a few remarks respecting it.

Fracture of the Parietal Bone—Trephining.—In continuation of the subject which last engaged us—fracture of the skull—try to recollect the chief circumstances attending the case of Thos. Garlic, a young man, 24 years of age. It appears that he was struck by some part of a steam-engine in motion. I know not the form of the part of the engine, or the velocity with which it descended, but it was remarkable that the blow occasioned only a momentary insensibility, and that the patient walked into the ward. The integuments were open, the skull was fractured in the parietal bone, and there was a slight depression. In the meantime, no symptoms were apparent—the mind was collected, the senses perfect: he had lost a considerable quantity of blood from the integuments, and blood oozed from the fracture. The pulse was frequent from the first (this, by the by, is a contradiction, as to there being no symptoms): I found his pulse up to 120. This was subdued by the means employed. On the second day the pulse began again to rise, and continued rising; and more distinct symptoms of inflammation came on. A consultation was called, and the operation of trephining was determined on. Why was it determined on? We are met that I may explain why; and the subject is an important one for you to reflect upon. The edge of the fractured bone was rough externally; and such being the case, it indicated that it must be sharper still internally, that, in all probability, this rough or sharp edge was pressing upon and irritating the membranes of the brain. This plan [presenting it] will shew you where the trephine was applied.

It was necessary to soothe the patient during the operation; which is of the utmost consequence; because struggling and outcry are attended with great forcing of the blood to the head. The operation was, therefore, performed with all possible gentleness and precaution, so as to keep the poor man quiet, and this principally, you are aware, by avoiding much interference with the integuments. The day after the operation stupor came on, and that stupor gradually increased with a rising pulse, so that it was counted 150: this was attended by loud snoring, and at ten P. M. by convulsions. The action was greater on the left than the right side of the body; the left arm and leg became rigid and cold; the right eyelid hung down, and he died twenty-four hours after the operation.

On examination after death, a thin clot of blood was found under part of the bone. There was no blood under the dura mater, which some of you conceived, from the symptoms, to be the condition. There was, however, an effusion of lymph and purulent matter, not only upon the hemisphere of the brain under the part operated upon, but also extending to the other hemisphere. There was serum in undue quantity in the ventricles, and under the tunica arachnoides at the base of the brain.

This history, and these appearances in the dead body, imply that the patient died of effusion consequent on inflammation—and that inflammation propagated from the wound and local injury of the brain—rather than of the concussion and general injury.

This being the last of the cases of fracture of the skull which I have to place before you, let us endeavour to recapitulate—or I would rather say, let us consider—the subjects which should most interest you, as leading to a just view of the pathology of these cases.

Concussion.— Let me advise you, in studying this subject, to endeavour to distinguish the state of concussion. You understand it to be the effect of a vibration from the blow, which goes round the skull and through the brain, affecting the whole—an effect which will be immediate. An injury to the brain, a part so abundantly supplied with blood, has, as I have already stated, certain and immediate consequences: and you will notice the stages proceeding from this condition. It has three stages—insensibility, excitement, and effusion: the insensibility is the direct effect of the injury; the excitement is consequent upon the rising of the inflammation from the injury; and the effusion results from the inflammation. You see the man at first lying like a person dead; lift him up, and he scarcely breathes: you feel his pulse, but you can scarcely perceive it; he is cold and insensible; he is like one in danger of instant death. But, by and by, there is a flushing of the face, an increased action in the arteries of the temples; increased heat of the body: these

are symptoms of inflammation; and with the rising of the inflammation, there is a return of sensibility, in a certain degree, too often to be followed by a deeper insensibility than at first, differing from the insensibility which was before noticed by the stertor in the breathing, an effect, therefore, of effusion—an effusion which implies the compression of the vessels of the brain, and a certain interruption to their activity. If he recover from this condition, he is still subject to another effect of inflammation—that of the deposition of coagulable lymph; and if he survive this, he is too apt to be deprived of some functions; to be prone to disordered health, and to singular changes in temper or disposition. I hope you have attended to a very interesting case of inflammation, and its consequences, after concussion, in a woman who was placed downstairs, from her violence and outcry disturbing the other patients. I am sorry to say that the account of it is not before us.

Inflammation.—The next head for remark in studying this subject, is inflammation of the brain. You remember that there is inflammation in this organ from injuries, similar to that idiopathic inflammation which you learn from your medical studies, and marked with all the symptoms of high action in the vessels of the head. But we have to notice that there is an inflammation different from that, in as far as it is not marked by the same distinct symptoms, but yet is sufficiently apparent when you see the effects in the dissection of the body. Thus, from a blow upon the head, from a depressed bone irritating the brain, from the presence of a dead bone irritating the surface of the brain, you have a deep abscess or suppuration in the substance of the brain, with adhesions around it, and all those consequences which you know must have resulted from inflammation. Inflammation, then, is present during life, but there are none of those symptoms which you learn to enumerate under the head of idiopathic inflammation —no flushing of the face, throbbing of the temples, or general excitement, or violence; but, on the contrary, the man is torpid, or sleepy: you can rouse him for a time, but by and by you cannot, and so he falls into a deeper insensibility, and dies. When you dissect him you find, as I have said, a well of matter in the brain, and all the effects of deep and great inflammation.

Thus you perceive it to be necessary that the surgeon should study most carefully that partial and insidious inflammation which is attended with destruction of the brain itself: and while we are on the head of inflammation, may I entreat you to remember that in its commencement you will often be deceived by a seeming amelioration of the symptoms; that is to say, the man comes in, perhaps, with compression of the brain, perhaps with concussion, and he lies insensible? By and by, the friends are agreeably surprised to find that he sits up in bed, that he points to them, and converses with them, and they think he is about to get better, to survive the accident; but presently he falls into what I described before as a state of deeper insensibility. So in the history of almost all cases, we find the surgeon pleasing himself with the effect of his operation of trephine. The man is carried out of bed in a state of insensibility; the integuments are opened; the trephine is employed; the bone is raised; and, behold, his patient is greatly improved, for he gives tokens of sensibility, almost of restoration of sense; but too often this is not the effect of raising the bone, but results from the excitement of the operation, the struggling of the patient, and the degree of inflammatory action excited. Excitement from inflammation deceives us; we consider that there is an amelioration of the symptoms, when in truth it is a state which continues but for a time, and is the forerunner of death.

Compression.—The third head, which should engage your attention, is that of compression of the brain. You are to consider that it is not, as the word implies, compression of the brain itself, but such an encroachment upon the vessels of the brain as prevents them ministering to the functions of the organ. You know very well that muscles will not continue to act unless they have the circulation through them; the eye will not continue to be sensible unless the circulation be perfect through it; and so with regard to the brain, if you take away too much blood by bleeding, you have faintness; and if the blood be prevented passing freely out of the brain, or through the brain, you find insensibility, with some variety in its character, proportioned to the cause. When, from defect of circulation, for example, there is deliquium, there is not that stertor which you find accompanying insensibility with a full pulse. When a clot of blood occupies the brain-case, in proportion to the volume of the clot there is an encroachment on the cavity, and an embarrassment of the circulation. The vessels cannot act freely, the organ suffers from the want of circulating blood, and the symptoms of compression are present.

On this head I would have you to notice a statement which is often made, both in this hospital and elsewhere. Cases are put down as relief from compression on the brain. I will state what occurs. There is a dead portion of bone, for example, and

under that dead portion there is a tea-spoonful of pus upon the surface of the dura mater. The operation is performed; a portion of bone is taken away, and a little matter is permitted to escape. By and by the patient recovers, or is remarkably improved in symptoms; and the case is put down as the effect of pressure removed from the brain. Now I cannot give credit to this; for if I see effusion in ten times the quantity—if I see a clot of blood ten times larger than this, without producing any symptom, how can I acquiesce in the belief that a little matter, not more, perhaps, than half a tea-spoonful, taken away, should remove, as the term is, pressure from the brain?

By taking off the dead bone in the more common case, and freeing the membranes from the presence of matter, you sometimes see, happily, all the symptoms removed. I am ready to acknowledge the fact, but I cannot acquiesce in the reasoning, and I think we must take a new element into the argument: in short, I conceive that we remove irritation, not pressure. I remember Mr. Cline narrating, during a consultation, that he had trepanned a man who had received a blow on the head with some sharp point (I forget what), and who fell into a state of insensibility, and remained long in that condition; but being trepanned, there appeared a small point, like a thorn, projecting from the inside of the circular portion of bone. By the operation the senses were restored.

You will excuse me giving these remarks upon the three divisions of our subject—concussion, inflammation, and compression: I fear they are conditions little understood.

FRACTURE OF THE SPINE, RIBS, LEG, AND DISLOCATION OF THE HUMERUS.

Now let us turn to a subject of equal interest—fracture of the spine. Let me entreat you to omit no opportunity of studying the injuries of this part; for you know that the spine is equally important with the skull, and that it has its importance from the same causes—nmely, that it contains within it a vital organ. Study it, therefore, I entreat you. First make yourselves masters of the anatomy, and then of those subjects which are continually presenting in practice: the lateral distortion of the spine; the scrofulous inflammation of the bodies of the vertebræ; the effect of injury in producing inflammation, and thickening of the theca and membranes of the spinal marrow; and lastly, fracture and dislocation: fracture of the spine should more immediately engage your attention.

You remember the structure of this column; that it is a beautiful combination of parts producing firmness and elasticity; you remember that the bone is light and spongy, and that the strength of the spine principally resides in the ligaments. So strong, in fact, are the ligaments of the spine, as contrasted with the bone, that the bone will break before the ligaments give way; and this is especially the case with the lower vertebræ when a man is crushed down and the column bent.

Now the *case* is this: "Joseph Neal, 40 years of age, a labourer." I am almost tempted to stop and comment at that word, for certainly no philosopher could ever exhibit more temper, calmness, and good sense, under such an affliction, and under the anticipation of immediate death, than this poor man; I was struck with his whole demeanour, with his good sense, and unpretending Christian piety;—a labourer, then, admitted on the 8th November. The attendants, those who came with him, state, that whilst he was digging a drain, the ground above gave way, and covered him. As soon as it was possible the earth was removed; it amounted to three cart loads. When he was extricated, it was found that he had fracture of the spine; several of the ribs were broken; there was dislocation of the humerus, and comminuted fracture of the leg. He was cold and pale, and scarcely respiring; in short, like a dying person. Being brought into the hospital, he was comfortably placed in bed, the leg attended to, the shoulder reduced, and this reduction was effected without any force; and indeed, when the bone was reduced, it was very easily dislocated again, by motion of the arm, conveying the impression that there was great laceration of the tendons and ligaments. His symptoms altered but little, although he lived eighteen days, and he died apparently of gradual exhaustion. The prominent characters of his sufferings were, loss of sense and motion from the hips downwards, inability to retain the fæces, incapacity to pass the urine, which was drawn off by a catheter for the first few days, and afterwards dribbled away.

On examination of the dead body, there was found fracture of the twelfth dorsal vertebra; the displaced portion of the bone pressed on the spinal cord, without having burst through the theca. The spinal marrow was softened, but no further evidence of inflammation was apparent; several of the ribs were broken on each side of the chest. The shoulder joint was examined, but no appearance connected with the dislocation found, the capsular ligament being entire. But the state of the fractured leg was very different: here there was no attempt at a process of union; no callus had been thrown out; the effused blood even was not absorbed, and the fracture was in every respect such as is exhibited in a

recent injury *. The result of active pleuritis was found on the right side of the chest, and the membranes were there thickened and adherent. The left lung appeared as if it had been compressed by air or fluid: it was dense as muscle; (I suppose *liver* would be a better term, hepatized; however, here it is said "it resembled muscle, and could not be inflated.") "In the abdomen nothing particular was observed, except extravasation of blood in the cellular texture, about the fractured portion of the spine. The bladder was thickened, inflamed, and emitted an exceedingly fœtid odour."

Now I understand that you have been debating this subject in your Society—I mean the necessity of nervous energy to support inflammatory action—and I fancy I will be wise to leave that inquiry altogether. Is there a little influence of hypothesis in this account of the case? It would appear that the upper extremity, the shoulder-joint, went through, in this short time, all the processes of restoration; that the membranes of the chest underwent the usual changes, by the coagulated blood being absorbed, and coagulable lymph deposited; but that in the lower extremity no re-action took place, no inflammatory process, and that the joint resembled one on which an injury had recently been inflicted. I say, all that is very remarkable; but still we take it with some little reserve, in as far as I see it is a matter debated among you, whether or not the injury to the spine took off the nervous energy from the part, and was the cause of the absence of the usual effects of injury. You see the question would embrace this—whether the constitutional power of the body depends upon what is termed the ganglionic or sympathetic system, or results from something emanating from the cerebrum and spinal marrow?

However, I am inclined to attend to matters of a little more practical importance. You find that the spine is broken, that there is a fracture of the bodies of the vertebræ, not by a blow, but by the neck being bent down and crushed; that a person receiving a weight upon his shoulder, the spine is broken down, and instead of the ligamentous connexion giving way, the bodies of the vertebræ themselves are fractured, and they are broken at the lower part of the back. Why? If you have to mend your whip or your fishing-rod, and splice it; and if it breaks again, it will be close to where you have spliced it. The reason is this: by the splicing you have destroyed the elasticity and motion at that part, and therefore the motion is thrown proportionally more on the point next to it. Now when you consider the texture of the thorax, and that all the dorsal vertebræ are, as it were, surrounded and supported by the ribs, so that there is a greater consolidation of the vertebræ of the back; and that they are more firmly braced together than those of the neck or loins, you see that when the body is crushed down from a weight bearing on the shoulder, the injury must fall with accumulated force upon the point immediately contiguous to that which is so spliced, as it were. This is the reason why injury, by the forcing down of the shoulders, takes place at the lowest dorsal vertebræ.

There has been a notion prevalent, that fracture of the spine affords a fair case of analogy with fracture of the skull; but there are very important differences. When a man has suffered a fracture of the skull, you know, just as in the last case you were considering, that there is a piece of bone driven in; but as to the brain, it is a small portion of the organ that is bruised, compared with the whole mass. When, however, the spinal marrow is bruised by the intrusion of the fractured bone, and certainly if the intrusion be such as to deprive the lower part of the body of sense and motion, it is the whole of the spinal marrow that is injured. How, then, can you hope for restoration? The idea entertained is, you will observe, that when the arch of the vertebra is broken down and thrust in, you may, upon the analogy of a fractured skull, make an incision, and draw out the depressed bone. My first objection is, that it is very seldom, indeed, that there is an actual forcing in of the posterior part of the spine, the ring of bone: generally it is a fracture of the body of the vertebra; and it occurs in the manner that I have explained to you. But even suppose it were a depression of the posterior part of the ring of bone, you would surely not think of operating unless symptoms of paralysis of the lower extremities implied injury of the spinal marrow: and if the pressure — not gradually applied, you know, but produced by the force of the intrusion of the part—has the effect of destroying sensation and motion in the lower part of the body, how can you expect restoration? The analogy does not hold; because in cases of fracture of the skull, you take away pressure from a small part of the brain; but here, there is pressure of the whole of the spinal marrow, that is to say, the spinal marrow is irretrievably crushed, and in this very case you see it is so. The sheath is not burst—the spiculum is not sticking into the spinal marrow, as it sometimes is; but by the separation of the parts, there has been such a bruise of the spinal marrow, that it does not recover.

* The cases read by Sir Charles Bell at lecture are in general drawn up by the house-surgeons.

My next objection is, that the effect of an incision upon the broken bone—of an exposure of the spinal marrow by opening the theca, (for this must be the consequence, I suppose, of withdrawing a sharp bone—opening the theca or sheath,)—is infallibly to produce inflammation within the sheath—inflammation of the spinal marrow itself. These are the reasons, then, why I should never think of trephining or raising up the broken portion of bone; these are the reasons why I conceive there is no true resemblance in the two cases of depressed skull and fractured spine. In the latter case you can do nothing. It is very humiliating to come to that decision; but really, from all I have seen, I can come to no other conclusion. No doubt, when we see a poor fellow, as you have seen this man, like a wounded snake, and only one half alive—when you foresee his fate approaching certainly, though slowly—your best feelings arm you against those sober reflections, and in favour of the more ingenious and adventurous surgeon who resolves to be doing.

I have exhausted my notes almost unexpectedly, but there is one subject on which I will say a few words. I think I finished rather abruptly when I last spoke of inflammation of the veins. What you have seen in this hospital is sufficient proof to you of the frequency of inflammation of the veins, but there is one point especially important to you as general practitioners; I mean the study of the effects of diseases of the uterus and parturition, in producing inflammation of the veins; and you have now a case in the house of phlegmasia dolens. You know that these are strange times we live in, and what has been held sacred—the condition of a man's private life and means—is now made public. Were I to make a remark for your private ear, a recommendation on a point of practice drawn from some occurrence in the hospital—"take care not to do this," or "you see the effect of that;" it has a different colour when printed and divulged abroad; and what is designed as a wholesome precaution to you, appears in the form of a criticism, perhaps, on a colleague. Whether this publicity is to be attended with good or bad consequences, I declare I cannot tell; but one thing is especially unpleasant, and that is, the privilege assumed of giving the history of a man's life during his life. Now I have the honour of this sort of notice, and you are given to understand that, in the early part of my career, I was a midwife, and came to London to prosecute that branch of practice. Not so; I never attended in that capacity; but I studied the subject diligently. I had, early in life, the advantage of making some very interesting dissections of women, undelivered, with distorted pelves, both from rickets and from mollities ossium; also after the Cæsarean section had been performed, and in cases where the woman had died of flooding, and in other instances, where she had died of violence by instruments. These were opportunities which, I hope, I did not neglect; and they have enabled me, from time to time, to see that many practitioners proceeded successfully in their career of practice (under God's providence to child-bearing women), without a knowledge of principles drawn from such secure foundations as we have offered in the dead body. I had almost used the word in another sense, and said they were unprincipled men. But what I really mean is, to entreat you, whatever department of the profession you may hereafter follow, to consider this of midwifery as an essential and important part of study. I have been drawn to make this remark, because you have a case of phlegmasia dolens in the house, and I hope you have attended to it; if not, seize every opportunity of doing so, for these cases are very curious and instructive.

THE OTIC GANGLION.

To the Editor of the Medical Gazette.

Sir,

In the number of the Medical Gazette for Dec. 21, there are some remarks, by Mr. Thurnam, on the method of dissecting the otic ganglion. He will permit me to say, that the directions which he gives are extremely good; and will be pleased to learn that, by following a method nearly similar to his own, I have succeeded, within these few days, in displaying the ganglion. Mr. Thurnam adverts to some observations written by me, and printed in the Medical Gazette in July last, in which I mentioned that I had twice failed in the attempt to discover the ganglion. He remarks very properly, that the previous maceration of the part in acid, which I had employed, was superfluous: this process, I am now persuaded, not merely was superfluous, but tended greatly to increase the difficulty of finding the ganglion, the texture of which was probably partly dissolved, at the same time that the characteristic colour was entirely destroyed, by the acid.

The adjoined figure represents the otic ganglion of the right side, displayed in an adult forty-eight hours after death.

The exact dimensions of the ganglion are as follows: length, ·32 of an inch; greatest depth, ·15; thickness ·1.

The shape of the ganglion, as I have delineated it, differs from Arnold's figure, but the ganglion of the other side had the same shape; and these are the only two instances in which I have dissected the part. The branches from the ganglion follow the order described by Arnold; but they are more numerous; and two of them form a remarkable plexus with the chorda tympani, at the base of the cranium, which Arnold does not figure. The preparation, from which my drawing is taken, may be seen in the Museum of King's College.

The physiological interest attaching to the otic ganglion is evidently considerable. The otic ganglion evidently bears the same relation to the organ of hearing, which the lenticular ganglion bears to the globe of the eye.

I have the honour to be, sir,

Your obedient servant,

HERBERT MAYO.

King's College, Jan. 11, 1834.

IDENTITY OF GLANDERS IN THE HUMAN SUBJECT,

AND THE DISEASE CALLED

MALIGNANT PUSTULE.

To the Editor of the Medical Gazette.

SIR,

IT occurs to me that the disease described by Dr. Elliotson, in the 18th volume of the Medico-Chirurgical Transactions, under the name of "Glanders in the Human Subject," and which he says is mentioned "in no writer upon contagious or cutaneous diseases," is nothing else than the gangrenous eruption described by Thomassin in 1782, and by Enaux and Chaussier in 1785; and generally known, in France, by the appellation of "*Pustule maligne.*"

Rayer, in the second volume of his Treatise on the Diseases of the Skin (p. 71), has given a perspicuous account of the complaint, agreeing in many particulars with Dr. Elliotson's description. Whether I am right or wrong in my conjecture, it is certainly to be regretted that Dr. E. has not touched upon the diagnosis; if there be any difference between the disease he has seen arise from the communication of glanders, and the malignant carbuncles observed by the French to be produced from a similar cause.

According to Rayer, malignant pustule is a contagious and gangrenous inflammation of the skin, characterized at its commencement by a vesicle filled with bloody serum, under which there forms a small lenticular induration, which, in its turn, soon becomes surrounded by an erysipelato-phlegmonous tumefaction. Gangrene seizes the tumor, and extends rapidly from its centre to its circumference. This disease seems always produced by the contact of animals affected in a similar way, or by the contact of their carcases; and occurs chiefly in farriers, shepherds, tanners, butchers, and others occupied much with the lower animals or their remains. It attacks those parts of the body which are habitually exposed—as the face, the hands, the arms—or such as have been accidentally exposed; and it has been more frequently met with during the existence of epidemic diseases of the carbunculous description among cattle, than at other times. The bloody serum of the pustule is the means by which the disease is propagated. Rare in Paris, this disease is said to be common in Lorrain, Franche-Comtê, and Burgundy. Its progress in individual cases is rapid, and the result is often fatal. Death has been known to occur in twenty-four hours after the person was attacked.

When malignant pustule attacks the face, the phlegmono-erysipelatous inflammation spreads to the neck, and even to the chest. When the eyelids are the seat of the disease, the face is

enormously swollen and excessively pained; there is deep-seated headache, delirium, sometimes loss of the eye, and always a great degree of ectropium—the lids being often left in such a state of disorganization that they consist of little more than conjunctiva.

Rayer quotes a number of interesting cases of this affection, which still tend more and more to excite a suspicion of the identity of malignant pustule and the disease described by Dr. Elliotson. I shall be glad if this notice of the subject attract the attention of that gentleman, or of any of your readers capable of throwing light upon the question which I have thus ventured to moot.

I am, sir,
Your obedient servant,
W. Mackenzie, M.D.

Glasgow, Dec. 25, 1833.

PATHOLOGY AND TREATMENT OF DRY EARS.

To the Editor of the Medical Gazette.

Sir,

I shall feel obliged to any of your readers who will explain the pathology of the disease commonly called *dry ears*; and the best mode of treating the deafness and want of wax in that affection.

I am, sir,
Your obedient servant,
Auditorius.

Dec. 25, 1833.

STRICTURES ON MR. BATTLEY'S ANALYSIS OF SARSAPARILLA.

To the Editor of the Medical Gazette.

Sir,

I beg you to insert the following observations in your valuable publication, on a paper which appeared there last Saturday (January 4th), entitled, "On Sarsaparilla, by Richard Battley, Chemist."—I remain, sir,

Your obedient humble servant,
S. J. Ames.

London, January 8, 1834.

Your correspondent, Mr. Battley, has given "Tables, intended to exhibit a comparison,

"1st. Of the quantities of extract, &c.

"2d. Of the quantities of the several *indestructible principles* contained in these roots." This would seem to imply, by the way, that a *principle* can be destroyed: Mr. Battley will perhaps favour your readers with an instance of it.

With respect to the results of his analysis, I may observe he states, that "the decoction contained starch;" when most of your readers must know that this substance coagulates by *boiling*, and is rendered insoluble in water.

As one will serve for all, I shall notice only the table "No. 1. Analysis of 2 oz. of the roots, bark, and wood, of Lima Sarsaparilla;" and to exemplify our analyst's singular discoveries, I shall take the division "roots, 2 oz. = 960 grs." In the first operation (that of separating the extract from the roots), he makes the total of extract and residuum, 835·5 grs.; the deficiency being 124·5 grs. This he attributes to an essential oil, to which I shall presently more particularly refer. But as to the loss of 10·6 grs. which occurs during the analysis of the ashes, weighing 49·5 grs. he offers no explanation. From the table, it would be supposed that both the muriatic and sulphuric acids existed in an uncombined state; for neither in the tables nor in any other place does he inform your readers of the salifiable bases with which they are united.

The last substance on the list is lime; which Mr. Battley informs us occurs in sarsaparilla, and, as he does not mention that it is combined with any acid, we may conclude that sarsaparilla offers an instance, and it is the first on record, of free lime contained in a natural product.

After six elaborate analytical tables of sarsaparilla, he states, under "3. That water takes up from the roots the greater part, or nearly the whole, of the sulphates and muriates, a large proportion of oxide of iron, and a small proportion (varying, however, in the different roots) of the alumina and lime." He has in this place asserted what no chemist ever thought of before, or will now believe—viz. the solubility of oxide of iron and alumina in *water*. Again: our chemist says, "7 oz. of the roots of Jamaica sarsaparilla were macerated in cold water. To the infusion, a concentrated

solution of tartaric acid was added, so long as it caused any *disturbance*. The precipitated matter settled in two distinct strata, but the supernatant fluid remained turbid:" *i. e.* the precipitated matter did *not* settle. "This fluid (our author continues), and the superior stratum, were placed upon a filter, and the filtered liquid slowly evaporated. There remained a crop of crystals, which, after frequent washing with rectified spirit, weighed 41 grs. These were found to be bitartrate of potash." Thus he procured 41 grs. of bitartrate of potash from 7 oz. of sarsaparilla, giving about 12 grs. to 2 oz.; which 12 grs. he has entirely omitted in the tables.

Mr. Battley further adds, that "cold æther, sp. gr. 733, formed a pale yellow solution, which, being allowed to evaporate on the surface of water, deposited a little *wax* on the sides of the vessel." Dr. Turner, however, observes (in the third edition of his Chemistry, page 726), that "*wax* is only *sparingly* dissolved by *boiling* alcohol or ether; from which the greater part is deposited on cooling." This supposed *wax* agrees, in its yellow colour, with a peculiar product I shall presently notice.

In another part of this paper, Mr. Battley infers, from an indirect experiment, that 1 lb. of Jamaica sarsaparilla yields 90 grs. of oil; consequently it would require only 5 lbs. 4 oz. of the same root to yield one ounce of oil. Now I shall soon shew, from an authority quoted by Berzelius, that it would require 100 lbs. of sarsaparilla to yield 1 oz. of the oil in question.

Now, sir, in summing up, I shall prove that Mr. Battley might have saved himself much trouble; for every real *constituent* of sarsaparilla which he mentions, and others of which he appears to know nothing, have been previously described. Berzelius (Traité de Chimie) thus notices the discovery of Pariljine and Smilacine:—

"D'après Pallota l'infusion de la racine de salseparielle (smilax salsaparilla) mise en digestion avec un peu d'hydrate calcique, donne une base salifiable qui après avoir été lavée, séchée, et dissout dans l'alcool bouillant, se dépose, par le refroidissement de la solution saturée, sous forme d'une poudre blanche, d'une saveur désagréable et amère. Cette base brunit la teinture de curcuma, se dissout facilement dans les acides, et forme avec eux des sels qui pris à l'intérieur, excitent des nausées, et ralentissent le mouvement du pouls. Pallota appelle cette base *Pariljine*. Folchi a annoncé qu'en faisant macerer dans l'eau la moelle intérieure de la racine de salsepariclle, et abandonnant la liqueur à l'evaporation spontanée, après avoir traitée par le charbon animal on obtient de petits cristaux d'un jaune clair, qui sont peu soluble dans l'alcool, ont peu de saveur, mais produissent une irritation dans le gosier, et verdissent le sirop de violette. Il donne à cette substance le nom de smilacine." Tome v. p. 188.

It is this substance, I presume, that Mr. Battley has mistaken for wax. I shall also subjoin an analysis of sarsaparilla from the same author, tome vi. p. 210.

"Smilax sarsaparilla.—La salsepariellc contient suivant Canobbio 2·8 d'une résine âcre et amère, 5·5 d'un extrait gommeux, 54·2 d'amidon, 27·8 de fibre ligneuse (perte 9·7)." Most probably Pariljine, &c. "Dans le volume précédant (p. 188) j'ai parlé des expériences de Palotta et de Folchi relatives aux alcalis végétaux contenus dans cette racine. La salsepariclle contient une petite quantité d'une huile volatile: 100 *livres de racine en fournissent environ* 1 *once*. Rose trouva du sucre dans cette racine; qui mérite sous plusieurs rapports, un examen plus approfondi." But I leave it to you and your readers to judge whether Mr. Battley is a competent person for such a research.

Allow me to close this paper with tables of the component parts of this root, according to Berzelius and according to Battley:—

BERZELIUS.	BATTLEY.
An acrid and bitter resin.	Sulphuric acid.
A gummy extract.	Muriatic acid.
Starch.	Potash.
Ligneous fibre.	Iron.
Sugar.	Alumina.
Pariljine.	Lime.
Smilacine and an essential oil.	Starch.
	Resin.
	Wax, and an essential oil.

SENSATION PRODUCED BY THE CONTACT OF A CHOLERA PATIENT.

To the Editor of the Medical Gazette.

SIR,

HAVING been actively engaged in the treatment of malignant cholera, when it raged with extreme violence in this town, in October, 1832, I had ample opportunities of observing the various phenomena which characterize that mysterious disease. The most extraordinary, and not the least remarkable of these, is a peculiar thrilling and benumbing sensation communicated to the fingers on touching the body of a patient labouring under that disease: this sensation bears a great resemblance to a slight galvanic shock, and extends from the extremities of the fingers to the wrist, and occasionally even as far as the elbow-joint; and is more particularly observable when the patient is in a state of collapse, and when the body is bedewed with a cold and clammy moisture. I am not aware that any writer on epidemic cholera has noticed the above sensation as one of the distinctive characters; which is surprising, since it has been experienced by several of the medical gentlemen practising in this town, and has been particularly observed by Mr. Maclaughlin and by Mr. Charles Bell, who officiated as surgeon to the Dumfries Cholera Hospital.

Whilst on the subject of cholera, it may be mentioned, that, about six weeks ago, it re-appeared in Dumfries, in a sporadic form; isolated cases presenting themselves in almost every part of the town. Up to the present date, nearly thirty cases have occurred, the greater part of which rapidly proved fatal. The cases that came under my own care, equalled in malignancy any of those I witnessed last year, and of course were as little under the influence of medicine.

Discharge from the Fauces cured by Opium.

If the subjoined case is deemed worthy of the attention of your readers, you will oblige me by giving it a place in your valuable journal.

Joseph Harris, æt. 30, of tall stature, spare habit, and sickly aspect, was admitted into the Dumfries and Galloway Royal Infirmary on the 28th August, 1833. He is subject to a frequent spitting of a colourless, thin, and frothy fluid, of a saline taste, which flows into the mouth without the slightest effort of coughing. The quantity secreted in twenty-four hours amounts frequently to an English pint, and evidently comes from the mucous membrane lining the fauces and posterior part of the pharynx. When the secretion is suspended, which it occasionally is for a few minutes at a time, he labours under a painful sense of oppression and weight over the epigastrium, which he is immediately relieved from on the secretion being resumed. The soft parts of the throat appear relaxed and flabby, but are natural in colour. His tongue is white and furred; his skin feels harsh and dry; his bowels are usually confined, and he complains of anorexia and flatulence, and occasionally of dysuria, attended with considerable pain in the hypogastrium and across the region of the kidneys. His urine is high-coloured, and deposits a copious sediment. He attributes his complaints, which are of two months' standing, to having slept in a damp bed. Has never been under the influence of mercury. Tonics and purgatives were prescribed, and persisted in till the 13th September, without producing the least benefit.

Having seen, in the thirty-fourth number of the Medico-Chirurgical Review, the details of a similar case, by that able physician Dr. Graves, of Dublin, in which the best results followed the use of opium taken in large quantities, I suggested to Dr. Symons, the senior physician, the propriety of giving it a trial in this case; and we very soon had the pleasure to witness it produce the most salutary effects. The dose of opium was gradually augmented from a grain every sixth hour to a grain every third hour, and the only inconvenience attending its administration, was constipation; which was obviated by the daily use of enemata. The quantity of secreted fluid diminished every day, and, from being thin and watery, it gradually became more viscous and tenacious, increasing in consistence as it diminished in quantity. By the 4th of October the quantity of fluid secreted was so trifling, and his general health

so much improved, that he was permitted to leave the hospital.

I have the honour to be, sir,
Your obedient servant,
JAMES GRIEVE, M.D.
Junior Physician to the Dumfries and Galloway Royal Infirmary.

Dumfries, January 4, 1834.

LITHOTRITY PERFORMED BY AN INDIVIDUAL ON HIS OWN PERSON.

To the Editor of the Medical Gazette.

SIR,

IN the Asiatic Register for the year 1801 is the following case of lithotrity, performed by an individual on his own person. It is related among other authentic anecdotes of a very eccentric character, Major-General Claude Martin; and as it shews who was the original inventor of this operation, you may deem it worthy of record in your Gazette.

Your obedient servant,
D. M. D. DEVIZES.

December, 1833.

"During the last fifteen years of his life he was much afflicted with the stone and gravel; and disliking to undergo the usual surgical operation for that complaint, his ingenuity suggested to him a method of reducing the stone, so curious in itself, and so difficult in execution, that we should have doubted the truth of the fact, were it not attested by the positive evidence of several gentlemen of the first respectability. He took a very fine steel wire, of about a foot long, one end of which he cut in the manner of a file. The wire, thus prepared, he introduced by a catheter, through the urethra, into the bottom of the bladder, where the stone was seated. When he found the wire touch the stone, he gently worked the wire up and down, so as to give it the effect of a file; and this he continued to do for four or five minutes at a time, until the pain which the operation of the wire produced was so excruciating, that it obliged him to withdraw it. But finding small particles of the stone discharged along with the urine after the operation, he repeated it in the same manner from time to time, till, in the course of *twelve months*, he succeeded in completely reducing the stone. * * * * * Some years after the operation, gravelly concretions began again to form in the bladder; and as he did not choose to try the wire a second time, these continued to increase until the end of the year 1800, when they finally occasioned his death."

SOME FACTS IN THE HISTORY OF THE LATE CASPER HAUSER;

Chiefly with reference to the Physiological Circumstances.

IT may be recollected that some time ago the journals gave an account of this singular young man, who was found one day in the streets of Nuremberg, where nobody could tell who he was, or whence he came: the same obscurity has attended him to the last. Casper Hauser appeared at that time to be about twenty years of age; could not speak; and to all appearance had been immersed from his infancy in a narrow dark dungeon, where he could never stand erect, nor had any thing for food but bread and water. He was about five feet in height; had a short downy beard on his chin and upper lip: his complexion was very pallid; his limbs slender; and his feet evidently had never been enclosed in shoes. His expression was that of gross stupidity: he seemed scarcely to know the use of his hands; and when he attempted to walk, it was like the first efforts of a child. He could endure no food but bread and water; and his disgust for all other nutriment was such, that the very smell of meat was sickening to him; and if by chance he swallowed a few drops of wine or coffee, he was presently seized with violent vomiting.

In some time after, when he was able to make himself understood, it was gathered from him that he knew nothing of his origin; that it was at Nuremberg he for the first time learned that there were other living beings besides himself and the man with whom he had always been. As long as he could remember, he inhabited a little and low chamber, continually sitting, barefooted, and with no clothes except a shirt and pair of trowsers. He had never seen the sky, and could scarcely be said to have ever seen even the light of day. Upon

awaking from sleep in his little dungeon, he usually found near him a loaf and a pitcher of water: sometimes the water was ill-tasted; but generally when this was the case, his eyes grew heavy, and he fell asleep; and when he awoke he found his shirt had been changed, and that his nails were clipt. He never saw the face of the person who supplied him with food. How long this state of things lasted, nobody could tell. But it was further learned from Casper's imperfect mode of conveying himself, that on one occasion his keeper came into his chamber, and, standing behind him, in order the better to remain concealed, he held the lad's hand, and made him write something: he then put him on his legs, and tried to make him walk. A short time afterwards the keeper took him on his shoulders and carried him to some distant place. Casper could tell nothing about the journey, except that he fainted several times on the way.

In the early part of his residence at Nuremberg, his right side was subject to violent convulsive motions, particularly when any object strongly impressed his sight. No noise or even rough treatment used then to disturb his sleep. Sunshine inflamed his eyes. Pictures and drawings affected him as if they were models in wood.

The multiplicity of impressions now made on his mind soon raised his nervous system to a high pitch of excitement. The muscles of his face were much affected with nervous contractions; his hands trembled to such a degree that they could hold nothing; his hearing became so painfully sensible, that the sound of a drum threw him into convulsions; and he complained when persons talked in a loud voice near him. He lost his appetite, and he was obliged to be removed to a quiet house, where no visitors were permitted to see him. It was then he for the first time slept in a bed, and began to dream,—an affection which he never experienced before.

It cost him much suffering to habituate himself to the common diet, and it required months for the purpose. Warm food produced such a degree of thirst, that he was obliged daily to drink a great quantity of water to appease it. But by habit the convulsions ceased; the cerebral excitement diminished; the eyes were no longer glistening; and in short his health was re-established. It deserves to be particularly mentioned, that this change in his mode of life added two inches to his stature in the course of a few weeks.

The mind of Casper Hauser was like that of a child; and it was long before he could be taught to distinguish animate from inanimate objects. Every thing that moved or was moved, he thought was alive, and that the motion was spontaneous: thus a piece of paper blown by the wind seemed to him to be running away. He thought a tree was alive from observing the motion of its leaves and branches, and that its rustling noise was the language in which it expressed itself. He could see as well in the dark as in the clear day-light; this was often proved: and in the greatest obscurity he could distinguish between blue and green. His hearing, as already mentioned, was very acute; but his smell was the sense which caused him the greatest annoyance: all odours except those of bread and some aromatic seeds, were more or less unpleasant to him. At a great distance he could tell fruit trees from others, simply by the smell of their leaves. If he passed by a cemetery, the smell, which was imperceptible to other people, threw him into a fever. A rose would cause him to faint away.

To the effects of the magnetic needle, and of the contact of metallic bodies, he is said to have been tremblingly sensitive. One day a magnet was given him for amusement; he held it for a few minutes, and then threw it away, because he said he felt very uncomfortable with it. Professor Daumer, on hearing this, made some experiments with the magnetic needle upon him: when the needle was presented to his side, he complained of great pain in the stomach, and said he felt as if there was a current of air rushing out of his body towards the instrument*.

Metals acted powerfully on him, and by their contact caused him to feel an attraction and a degree of cold, that affected him in proportion to the bulk of the metallic bodies. If he took a cat by the tail, he felt a shuddering all over him, and a sort of shock in the hand†.

His mode of diet latterly was this:

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* We suspect the animal magnetizers had some hand in manufacturing this paragraph, and the one that follows it.—*Transl.*

† There is surely nothing remarkable in this, as Hauser does not appear to have been much accustomed to cats.—*Transl.*

he could eat all sorts of meat except pork; but he required to have his animal food slightly spiced and seasoned. Water continued to be his favourite beverage, though he would occasionally take a cup of chocolate in the morning. He hated all fermented liquors—wine, beer, &c., as well as tea and coffee; in other respects, he lived like other people. He could still see in the dark, but not so perfectly as formerly; and the only singular thing, perhaps, that remained about him of late was the recollection of his extraordinary destiny.

The unhappy Casper Hauser is no more: he perished on the 17th of November last by the dagger of an assassin. He had lived for some time at Anspach, where the President Fauerbach gave him some little employment in his clerks' office. Lord Stanhope also, while at Anspach, contributed to make him comfortable. The assassin escaped, and is wholly unknown: it is said, however, that he is the same person who made a former attack on Hauser's life. The deceased was returning to his office about noon, when he was accosted by an individual, who promised to reveal some important secrets if he would give him a meeting that evening in the park. Casper never told his friends, but imprudently kept the appointment. The stranger was waiting for him; and presently the fatal blow was struck, which finished the career of a man whose life and death have been equally mysterious and unfortunate*.

MEDICAL GAZETTE.

Saturday, January 18, 1834.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

EFFECT OF GENERAL PRACTITIONERS BECOMING FACULTY DOCTORS.

At the conclusion of our leading article last week, we hinted at the consequences likely to result to the general practitioner, if the scheme of merging all grades into that of *Doctor*, were carried into effect. The subject is a very important one, and deserves serious and dispassionate consideration. And first, we would desire to engage the favourable attention of those whose interests this journal has most falsely been said by its opponents to overlook, or to betray. The motive of these allegations is very manifest; but they are as utterly destitute of truth as are the manufactured quotations, and the jesuitical arguments, by which it is attempted to support them. One thing is quite clear, that the violent disseverment of what a contemporary calls the "unhallowed" tie between physic and pharmacy, would be by far the best thing which could happen as regards the interests of the physician, and the worst as regards those of the general practitioner—the most effectual plan to serve the former and injure the latter—which by any ingenuity could be devised. It is tacitly allowed by the one Faculty people, that a necessary preliminary to all practitioners being physicians, is the discontinuance of their supplying medicine to their patients; and it is obvious to common sense that such must be the case; because it would be impossible and ridiculous to speak of the grade, or rank, or designation, of two sets of practitioners being the same, one of which furnished goods and sent in a bill, the payment of which they could demand in a court of law, while the other gave them advice for a mere *honorarium*, which they might expect, but which, if refused, they could not legally claim. It is the circumstance of the patient not being obliged to pay the general practitioner at the moment, together with the idea of the medicines constituting a certain substantial and visible value received, which gives to this class of our brethren their great advantage over the physician, in the way of business. At pre-

* Gazette des Hôpitaux.

sent the parties do not contend for public patronage on terms at all equal; and the superiority of the position occupied in this respect by the former, is so great, that nothing but his relinquishing it can possibly prevent him from succeeding, on the great scale, to a much greater extent than his competitor. The moment, however, that he ceases to send medicine, and begins to require remuneration for his advice exclusively,—from that hour the physician and he stand on equal ground—or rather, he becomes a physician—and, catching at the shadow, drops the substance. It is in vain to tell us what they do in other countries, or rather, what experiments are there about to be tried; with a plain business-like matter-of-fact commercial person, such as John Bull, habit, and the principle of trade, are too strong to be overcome by fine theories;—and we appeal to the common sense of nine-tenths of the general practitioners of this country, whether, if they were to refuse to send their patients medicine, and to insist on a fee, however moderate, for their advice alone, they would not to a certainty be supplanted by others, who would take advantage of, and accommodate themselves to, the prejudices of the public?

This being our deliberate view of the subject, we have thought it our duty as journalists, however it may affect us as individuals, to put general practitioners on their guard against a bubble brought forward by those who have always claimed extraordinary merit for devotion to their cause. It is satisfactory to us to possess the assurance, that most cool-headed people regard the subject in the same light as ourselves; and that, while at the Westminster Medical Society, where a considerable number of young physicians and surgeons, not much heard of elsewhere, are in the habit of attending, this plan of depriving the general practitioner of his vantage ground has received some, though very divided, encouragement, yet, on the other hand, at the London Medical Society, the members of which are composed chiefly of respectable general practitioners, and of older physicians, a reform petition, to the exclusion of the one Faculty bubble, was carried *unanimously!* The good sense of the medical community will soon convince them who have been their real friends on this occasion—*we*, or our noisy opponents.

We readily acknowledge that there is something in the abstract which attracts, in the proposal of annihilating the "unhallowed" bond between practice and pharmacy; and it is only when we come to examine it coolly, and perceive its inevitable effects, that its impracticability, without sacrificing the present race of general practitioners, becomes apparent. We do not mean that it would be impracticable for all the general practitioners now in England to discontinue furnishing medicines, and to be made Doctors in Medicine; but what we say no Faculty, nor legislative enactment, could effect, would be—the prevention of others from selling medicines, and with them giving also their advice; so that the only practical result would be, a stock of M.D.s without business, and a new race of general practitioners in the place of those who had accepted of the *promotion* offered them.

There are two changes, however, to which these discussions naturally point, and which we hope to see accomplished—one affecting the lower and the other the higher class of general practitioners. We call those the "lower" who combine the dispensing of medicines with trade in other things—who keep gay and attractive shops with perfumes, and a thousand such articles, which have nothing to do with physic. This is an evil which

ought to be abated; it detracts essentially from the respectability of a learned profession, and all must feel (though some journalists may be too prudent so to say), that such persons are *bonâ fide* tradesmen, by whatsoever name they may choose to designate themselves. The general practitioners themselves ought to take this up, for they are the chief sufferers by it, and, if possible, they ought to get some other name set upon this class—for instance, "Practising Duggists," or the like.

With respect to the higher class of general practitioners, we mean those who, though they furnish medicine, yet do this to their own patients only; who are avowedly paid for their *attendance*—who sometimes make visits without sending any physic—who feel strong enough, if they had but M.D. attached to their name, to drop pharmacy altogether, and to take their place as physicians *de jure;* being already all but so *de facto.* We could name several such without any difficulty — skilful practitioners and accomplished men—to whom these remarks entirely apply. Now it appears to us that such gentlemen ought to have a way opened to them, by which they should be able to take that place in the profession to which the public voice would seem to have called them. Perhaps this would be most effectually done by the College of Physicians having the privilege to confer degrees—a privilege which we sincerely hope to see bestowed: but even without this, and as it is, they have the power to make such men physicians; for this does not require the previous doctorate. We have not heard whether this is among the contemplated improvements in Pall-Mall East; if it be not, we earnestly crave attention to the suggestion.

So far are we from any desire to keep up the "unhallowed" connexion between practice and pharmacy, that we would freely encourage all to abandon it who can; and for this purpose every facility should be held out. But we must protest against hurrying into this step those who, either from the class of persons among whom they practise, or other circumstances, would run the risk of being ruined by it; for, in truth, it requires that a practitioner be very firmly seated, to avoid all danger of others pushing him from his stool, when he drops the hold which the supply of his medicines, and the postponement of payment till a future day, conjointly, give him over his patients.

Our opinion certainly is, that there ought to be grades in the medical, as in other professions. We think it reasonable that a man who intends to practise in a situation where the returns must be very moderate, ought not to be compelled to expend as much time and money, in qualifying himself to do so, as he who purposes to take up his abode among the rich, who can afford to pay for talent and accomplishment as well as for every thing else. It is all very fine to tell us that science knows no gradations—that the diseases of the poor require the same skill as those of the rich—and a deal of such palaver, which may be true in the abstract, but which practically is mere talk. When the Deity ordains that ranks, gradations, and distinctions in society, shall cease—that there shall be no rich man and no poor—that is to say, when the millennium comes—the "One Faculty" scheme may be broached with some chance of being carried into effect; and we humbly take leave to suggest to its patrons, our worthy contemporaries, that they should postpone it till that time.

But while we hold to the necessity of different grades and departments in medical practice, we protest against the system of monopoly and exclusion which has been gradually growing up during a series of years—but which we now

hope to see terminated. We would leave the path open; that every man who desired, and who was able, to acquire the prescribed attainments, might ascend—a practitioner of the lower being always encouraged to join the higher department; and if this were the more usual mode of ascent, instead of being, as now, almost prohibited, we should have fewer young M.D.'s, lacking both fees and experience, and hear less of the jealousies which at present subsist between them and the general practitioners. How far these sentiments are inimical to the class last-mentioned, and how far they are consistent with the malicious statement that we are "horrified at the idea of the general practitioner rising to a par with the Scotch Doctor," we leave it for our readers to decide.

PROPOSED CHANGES IN THE COLLEGE OF PHYSICIANS.

It is pretty generally known that the College of Physicians, some time ago, appointed a committee to report on such changes as might be eligible, in order to accommodate their bye-laws to the spirit of the times, and to remove certain causes of dissatisfaction and complaint. A report has accordingly been drawn up, the details of which may possibly be modified, but the principles contained in which, it is to be presumed, will be adopted. The proposed changes are in some respects very important, but chiefly so with regard to the two following points:—

1st, That the practice of admitting the graduates of Oxford and Cambridge as Candidates, and subsequently almost as a matter of right to the Fellowship, is to be discontinued. All physicians applying for admission into the College, are in the first instance to be constituted *Licentiates;* and after a probationary term (shorter for English than other graduates), they are to become *eligible* to the Fellowship. Such number as it may be necessary to add to the governing body, is to be annually elected from the Licentiates, and added to the list of Fellows.

2d, A curriculum of medical education is to be prescribed, and required of all who become candidates for the license. This course is to comprehend five years spent in the acquisition of professional knowledge, during which time all the usual courses of lectures must have been attended, including surgery, and a lengthened hospital pupillage.

MEETINGS AT THE COLLEGE OF PHYSICIANS.

The evening meetings in Pall-Mall East are to be resumed on the 27th of the present month, and to be continued the last Monday of February, March, April, May, and June. The business of the season is to be commenced with a paper on the Education and Conduct of Physicians, by Sir Henry Halford. An essay on this subject, from the pen of the learned and accomplished President, could not fail at any time to excite interest, and cannot but be regarded as peculiarly apposite at the present moment.

ILLUSTRATIONS OF VERACITY.

Wakley, in his last number, remonstrates with us for setting his various titles under his portrait whenever we sketch him off in our pages; he compares us to certain artists, who, when they have drawn the picture of some animal, think it necessary to put the name underneath. When we draw *him*, he thinks it is superfluous to subjoin any appellative. We, of course, feel highly flattered at his acknowledgment of the fidelity of our likenesses; but he falls into a little mistake with regard to

one title which he says we have given him. We have never called him "liar," as he says we have: far be it from us to be so uncourteous: we dislike the word, and are generally content, when dealing with him, to point at conclusions by simply adducing the premises. The word, we repeat, which he gives with inverted commas as our precise expression, and which he cites as among the "choice specimens of language" in the Gazette, does not happen to be in *our* vocabulary; and though this little anecdote may be looked upon as giving him some claim to the designation, yet respect for ourselves has prevented us from ever applying it, even where we thought it was deserved; and we challenge him to refer us to any editorial article in which the word is employed.

Of falsehood, indeed, we have accused our contemporary often enough; for falsehoods flow from his pen as fluently as the ink with which he writes, and of even a blacker die. But what has particularly amused us just now in the conduct of Wakley, is, that after pouring forth a succession of calumnious accusations, such as prove his inventive powers to be equal to his malignity, he suddenly bursts into an indignant exclamation against the vice which he practises; and he—even *he*, the Editor of the Lancet—as "the unkindest cut of all" that he can give us, roundly says that we are—"near akin to the Father of Lies!"

It is truly delightful to see Wakley in a passion; indeed, our three *respected* contemporaries—(we like to retain the editorial courtesy)—seem to have been set quite beside themselves by our late "Illustrations of Consistency*," although each severally and individually not only protests the most absolute contempt for our lucubrations, but has actually written one or more articles to prove it; so that we have from the three of them not less than FIVE answers in one week. Who can doubt of their indifference after this?

Of these our three opponents, however, Wakley is, we must allow, the most "troublesome customer;" for long practice, and, we suppose, a little dash in his veins of that same old gentleman's blood to whom he says we also are so "near akin," have given him a great superiority over his partners in the way of mystification. We have some feeling for him at the same time; for, truth to say, the Gazette has been from the first a terrible thorn in his side. While he had only the Medico-Chirurgical Review to deal with, it was all child's play to him—it served only to show off his points; but the "Mock" (as he calls us) came upon him in an evil hour: the "unreal mockery" that scared Macbeth out of his senses was nothing to it.

But to the point: an excellent specimen of the kind of tact by which the worthy in question attempts to make much ado about nothing, is afforded in his last number. He acknowledges that he quoted as editorial, the sentiments of one of our correspondents; but adds, that he was "justified in making no distinction between what are called the communications of correspondents, and the editorial articles that appear in the Gazette." This assertion is *tolerably* impudent, but not quite so much so as the argument offered in defence of this piece of literary swindling. Last year, it may be remembered, when Wakley was "at bay," recalcitrating furiously against his supposed pursuers, we took the liberty of laughing at his awkward attempts to conceal his sufferings, and bothered him not a little with the following passage, which he appears to have stored up carefully for his private meditations, and probably been puzzling over it ever since:—

"Be it known, then, that the effusions which have so nearly driven our

* Med. Gaz. Jan. 14.

contemporary into phrensy, were written by no ONE: no man, nor woman neither, can claim them as their own."

This quotation, which, being interpreted for the benefit of the thick witted, means simply that *more than one* were engaged in writing the editorial articles in the Gazette, is adduced by Wakley to prove *that he was* JUSTIFIED *in making no distinction between the communications of correspondents and the leading articles which appear in this journal!*—and having come to this self-satisfactory conclusion, he proceeds to another extract; which is, in fact, a continuation of the preceding passage.

"We will further declare, for his gratification, that on no two occasions, when he has been goaded to more than usual ferocity, has the blow come from the same hand: some are living, and some are dead—some we do know, and some we never did know—to whom the merit is due of having aimed the shafts which have sunk so deep, and which have rankled so long."

Upon this passage the Lancet observes:—

"In the whole literature of England the parallel of these acknowledgments is not to be found. We do not allude to the unequalled stupidity of the composition, but to the unexampled want of principle necessarily inherent in a journal which has been thus conducted. Here is a writer who avows that the most infamous attacks on the moral private character of his literary antagonist, have been unhesitatingly published by him, although received *from the hands of persons* UNKNOWN!"

Not so fast, good Mr. Editor. No such avowal, we submit, is contained in what we say; nor can it be so construed, except by that satanic brain of thine, which perverts the simplest statements, and turns them to some bad end. The explanation is simply this:—the present Editor of the Gazette was not always the Editor. Several have been concerned in the journal, whom he never knew, and never even saw; one is dead; all, however, who *now* write, or who, during his editorship, ever have written, he does know *.

And now, most courteous reader, and thou most uncourteous misrepresenter of the plainest truths, with this simple key read over again the above "acknowledgments," said to be "unparalleled for their infamy in the whole literature of England," and say if any ingenuity can now torture them into the monstrous declaration which the "unparalleled" comment would imply? At the same time we acknowledge that it was perfectly *natural* for the Editor of the Lancet to put the worst possible construction on the expressions—for men will judge of others by themselves.

SYMPATHY BETWEEN THE LANCET AND THE MEDICO-CHIRURGICAL REVIEW.

As Dr. Johnson appears to have forgotten what he said at the Westminster Society, with respect to the terms he was on with the Lancet, perhaps the following memoranda will assist him in calling to mind the time and circumstances under which the *sympathy*, the existence of which we repeat he there acknowledged, originally began.

In July 1830, Dr. Johnson, continuing his usual warfare, called Mr. Wakley "a general libeller," and his journal "the reptile press"—"a mass of ignorance and imbecility," and the article then before him, a "composition of mud and blood †."

In August 1830, Dr. Johnson and Mr. Wakley met at the inquest on Miss Cashin.

In September 1830, Dr. Johnson began to praise Mr. Wakley, complimenting him on the excellence of his temper, and on having "brought reason and

* It is probable, from the above, that the letters of CHIRON have not been forgotten by our contemporary. We are free to confess we do not know who Chiron was; but *we* did not edit the Gazette when his letters appeared.—ED. GAZ.

† Med.-Chirurgical Review, vol. xiii. p. 472-4.

truth to bear with irresistible impulse on sophistry," &c.; "strongly" advising him as a friend, "to contest the next Westminster election with Sir F. Burdett*."

In November 1830, Dr. Johnson, desirous of getting up a subscription for Mr. Wakley, sent him £5; which the latter duly acknowledged, as, "from a variety of circumstances, it could not be otherwise than gratifying to his feelings†."

Thus, up to August 1830, Dr. Johnson and Mr. Wakley never mentioned each other but in terms of the bitterest invective; since September 1830, ("one little month!") they have never spoken of each other but in terms of commendation. Now we shall not repeat our offence by saying that the Doctor made any "overtures," or that there was any "arrangement" between the parties; we prefer supposing that the change which took place in both at this particular juncture was purely accidental; or that the "sweet sympathy" between them was one of those simultaneous movements which are said sometimes to occur in congenial souls, but which ordinary mortals are incapable of appreciating.

LETTER FROM DR. GREGORY.

To the Editor of the Medical Gazette.

Sir,

In the editorial article of your last number, headed "Westminster Medical Society — the Ballot," I find my name introduced, coupled with the following remark:—"The accusation in which they (the speakers) rung the changes, consisted in this—that the Doctor had supported the "one Faculty" scheme in the committee, and opposed it in the society; *which accusation we presume to be true*, because Dr. Gregory sat during the whole evening a model of patient sufferance, without once denying what was imputed to him, and without attempting to answer the exuberant oratory of his accusers."

The logic of this passage is, I confess, quite thrown away upon me. According to this reasoning, a gentleman is to be presumed guilty of any and every charge brought against him, because he does not reply to it. I should have expected better things from the author of that admirable *exposé* of the inconsistencies of the Editor of the Medico-Chirurgical Review, which adorned a recent number.

You have taken so much interest in the late proceedings of the Westminster Medical Society, that it is unnecessary I should tell you, that the business of the society on Saturday, Jan. 4th, was to decide "whether certain acts of the society were, or were not, in accordance with the laws and usages of the society." If any observations of mine could have elucidated that very simple question, they should have been made; but I trust I knew too well the duties of a member, to permit myself to be drawn into a discussion *wholly foreign* to the business of the evening; and even if, for the edification of the curious, I had waived this laudable custom, the most unlikely time I should have chosen for such a display would have been when I was acting as President of the meeting. I was elected President of the society for the second time (an honour unprecedented, I believe, in the annals of the society), because it was thought that my experience might assist in conducting the society safely through the stormy session which was even then anticipated. I should have made an ill return to the society for such a compliment, if, on the first occasion when self was involved, I had forgotten the rules of debate, and perverted the functions of a chairman.

So much, sir, for the *time* and *place* of meeting the accusation: now for the accusation itself. I am charged, you say, by certain speakers in the Westminster Medical Society, with (and what is more to the purpose, I am reputed by the Editor of a journal of high and well-merited reputation, to be guilty of) "having supported the 'one Faculty' scheme in the *committee*, and opposed it in the society." Now, sir, to this I reply, that the "one Faculty" scheme was never discussed in the committee of

* Medico-Chirurgical Review, vol. xiii. p. 572, and 574.

† Lancet, 1830-1, page 253.

the society at all. This, however, I allow, is a mere technical objection. What you probably meant to say when you presumed upon the truth of the accusation was, that I had, in Dr. James Somerville's drawing-room, at a *private* meeting of a few gentlemen, members of the Westminster Medical Society, on Friday evening, Nov. 22d, 1833, said or done something which certain gentlemen considered to be inconsistent with what I said or did in the society on Saturday December 7th, of the same year.

What I said in the society on the latter evening has been fully reported. I have not hitherto been in the habit of repeating what passes at private tea-parties; but if it is considered by you proper to do so, I shall be most happy to detail *every thing* that took place on that occasion, both before tea was brought up, during tea, and after tea, provided you will do two things: 1st, obtain the sanction of *all* the gentlemen present (a list of whom can be furnished by Dr. James Somerville, at whose invitation I attended), to the publication of such proceedings; and, 2dly, that you obtain their written sanction to the publication of *all* that took place that night, both with reference to the celebrated eighth resolution, and to those which preceded and followed it.

When all this has been done, you will be better able to judge whether "the accusation against me be true," than by presuming upon my silence while I was in the chair, and during the discussion of a subject which had no reference whatever to me, or to my consistencies.

I remain, sir,
Your very obedient servant,
GEORGE GREGORY.

31, Weymouth-street, Jan. 13, 1834.

[On the above we have but a word or two to say. On two previous evenings Dr. Gregory, not being in the chair, had ample opportunities of rebutting the charges of his opponents. On the last occasion, when he presided, if the imputations upon himself were relevant, he might have left the chair (especially as there was another President in the room), in order to reply; and if they were irrelevant, he ought at once to have stopped the speakers. From the tenor of Dr. G.'s letter, we trust we have been wrong in "presuming" that the allegation to which he refers was well founded; but then it is a presumption in which he is mistaken if he thinks that others do not participate. With respect to the transaction being "private," his accusers have shewn that *they* did not regard it in that light,—why then should he observe any such delicacy towards them? As to the rest, our only fault with Dr. G. as chairman, was, that his good nature, on which some members evidently presumed, led him to decline exercising in favour of himself that authority which he would, we are certain, have exerted in behalf of any other member of the society—affording them the protection which he disdained to claim for himself.—ED. GAZ.]

ROYAL COLLEGE OF SURGEONS.

UNROLLING OF A MUMMY.

THE theatre of the College of Surgeons was, on Thursday, filled to excess with members and visitors—including, among the latter, several dignitaries of the church and men of science belonging to different professions—all anxious to witness an exhibition which was announced by public advertisement. A mummy was to be unrolled; and the one selected for the occasion turned out to be a very fine specimen, which had been in the possession of the College since the year 1820. It was at the instance of Mr. Pettigrew, we believe, that the Council consented to have it opened; at all events, the task of performing the operation, with all the requisite ceremonial, was confided to that gentleman. He began by giving an historical sketch of the chief facts connected with the processes of embalming and mummification*: after which, he adroitly read off the hieroglyphics on the outer case. One line of these was particularly remarkable: it represented the god Osiris, seated as usual, with his sister and wife, Isis, standing behind him; while their son, Orus, was leading the deceased by the hand to introduce him and his offerings to his father. The style and titles of the deceased were set forth in a marginal line running round the cover: they were in the Phonetic character, and implied that here was "Horsiesi, the son of Naspihiniegori, an incense-bear-

* See, on this subject, our own lucubrations in this journal, vol. vii. p. 367.

ing priest of the Temple of Ammon, at Thebes." When the outer covering had been sufficiently exhibited, the unrolling began. The bandages were abundant, and very ingeniously applied; they were of an uniform buff colour throughout. After some time, the legs were extricated, but they were not yet stripped: they were found to be still further enveloped in separate rollers. The eyes proved to be artificial. But at this stage of the process, many persons present, who, owing to the crowd, could not get a sight of the mummy, were enabled to perceive by their olfactory organs that putrefaction had taken place in it, in spite of the boasted art of the Egyptians. Horsiesi was, in fact, still an incense-bearer! The unrolling was presently discontinued: the bituminous matter, indeed, on the inmost bandages, was found to be so adherent to the surface of the body, that the completion of the process would evidently require much time and trouble. But the poor priest was, in all conscience, sufficiently exposed: all his trappings being removed, there he lay, a miserable withered object, clothed in a few buff rags. Alas! poor Horsiesi! what did it avail thee to be thus magnificently mummified 2000 years ago; when all thy splendid and sacred hieroglyphics—not even the amulet on thy breast—could prevent thee from being carried 2000 miles from home, and rummaged by the hands of ruthless strangers!

THE LEECH-FISHERY.

(In a Letter from a French Physician.)

The country about La Brenne is perhaps the most uninteresting in France. The people are miserable-looking, the cattle wretched, the fish just as bad—but the leeches are admirable.

If ever you pass through La Brenne, you will see a man, pale, and straight-haired, with a woollen cap on his head, and his legs and arms naked; he walks along the borders of a marsh, among the spots left dry by the surrounding waters, but particularly wherever the vegetation seems to preserve the subjacent soil undisturbed: this man is a leech-fisher. To see him from a distance,—his woe-begone aspect—his hollow eyes—his livid lips—his singular gestures,—you would take him for a patient who had left his sick bed in a fit of delirium. If you observe him every now and then raising his legs and examining them one after the other you might suppose him a fool; but he is an intelligent leech-fisher. The leeches attach themselves to his legs and feet as he moves among their haunts; he feels their presence from their bite, and gathers them as they cluster about the roots of the bullrushes and sea-weeds, or beneath the stones covered with green and gluey moss. Some repose on the mud, while others swim about—but so slowly, that they are easily gathered with the hand. In a favourable season it is possible, in the course of three or four hours, to stow ten or twelve dozen of them in the little bag which the gatherer carries on his shoulder. Sometimes you will see the leech-fisher armed with a kind of spear or harpoon: with this he deposits pieces of decayed animal matter in places frequented by the leeches; they soon gather round the prey, and are presently themselves gathered into a little vessel half-full of water. Such is the leech-fishery in spring.

In summer, the leech retires into deeper water; and the fishers have then to strip themselves naked, and walk immersed up to the chin. Some of them have little rafts to go upon; these rafts are made of twigs and rushes, and it is no easy matter to propel them among the weeds and aquatic plants. At this season, too, the supply in the pools is scanty; the fisher can only take the few that swim within his reach, or those that get entangled in the structure of his raft.

It is a horrid trade, in whatever way it is carried on. The leech-gatherer is constantly more or less in the water, breathing fog and mist and fetid odours from the marsh; he is often attacked with ague, catarrhs, and rheumatism. Some indulge in strong liquors, to keep off the noxious influence, but they pay for it in the end by disorders of other kinds. But with all its forbidding peculiarities, the leech-fishery gives employment to many hands; if it be pernicious, it is also lucrative. Besides supplying all the neighbouring *pharmaciens*, great quantities are exported, and there are regular traders engaged for the purpose. Henri Chartier is one of those

persons; and an important personage he is when he comes to Meobecq, or its vicinity; his arrival makes quite a fête—all are eager to greet him.

Among the interesting particulars which I gathered in La Brenne relative to the leech trade, I may mention the following:—One of the traders—what with his own fishing and that of his children, and what with his acquisitions from the carriers, who sell quantities *second-hand*—was enabled to hoard up 17,500 leeches in the course of a few months; he kept them deposited in a place where, in one night, they all became frozen *en masse*. But the frost does not immediately kill them; they may generally be thawed into life again. They easily, indeed, bear very hard usage. I am told by one of the carriers, that he can pack them as closely as he pleases in the moist sack which he ties behind his saddle; and sometimes he stows his cloak and boots on top of the sack. The trader buys his leeches *pêle mêle*, big and little, green and black—all the same; but he afterwards sorts them for the market. Those are generally accounted the best which are of a green ground, with yellow stripes along the body.—*Gazette des Hôpitaux.*

MIDDLESEX HOSPITAL.

Strangulated Femoral Hernia—Operation—Recovery.

Mary Booth, æt. 42, married, no children, admitted into the Middlesex Hospital, under Sir Charles Bell, Thursday morning, December 19th, with femoral hernia of the left side. She states that she has been "subject to rupture" for two years, when it first came down, and was reduced in this hospital. She has worn a truss since that time. At seven o'clock on the previous evening, after some unusual exertion, it again came down. Feeling alarmed, after a few hours had elapsed, she sent for a medical practitioner, who, not being able to reduce it, recommended her to come to the hospital. Upon admission, there was a little pain in the abdomen, some trifling sickness, and distress about the countenance. The hernia was not tense, and did not yield in the smallest degree to the taxis. The warm-bath was employed, and bleeding *ad deliquium* at the same time, but without success. An enema was also subsequently given, which brought away a feculent motion, without, however, reducing the size of the hernial tumor. At twelve o'clock on the day of admission, eighteen hours from the time the gut came down, a consultation was held, and the operation performed without further delay.

Nothing particular occurred in the first steps of the operation: the stricture was very small, so that a great deal of care was requisite. The sac was opened, when some fluid escaped. The precaution was now taken to draw down a large portion of intestine, for the purpose of relieving, as it were, the strangulated knuckle. The crescentic arch was divided, and the tumor returned. Upon examination it was found, however, that instead of being within, it was without the cavity of the peritoneum, so that it was necessary to draw the intestine back through the opening. The finger was now inserted, and the neck of the sac was found grasping the intestine firmly. After some trouble, this was divided, and the mass returned. There was some doubt in the minds of the surgeons whether the intestine should be returned, in consequence of its having suffered considerably from strangulation. The colour was of a deep purple, and it felt thickened and softish; in one part, certainly, though small in extent, it was rather of a brownish cast. After the operation was over, a small quantity of sero-sanguineous fluid escaped from the wound, evidently coming from the cavity of the peritoneum. The parts were now carefully dressed, and the woman placed comfortably in bed, being exhausted from the pain of the operation. After an hour had elapsed, an aperient injection was administered, which, not returning by 5 P.M. ol. ricini 3vj. tr. sennæ 3iv. were given.

10 P.M.—Quiet; less pain in abdomen; no sickness; one feculent motion has passed, thin and fœtid; pulse 96, not altered in character.

Hab. Calom. gr. ij. Opii Pulv. gr. $\frac{1}{4}$, 4tis.

20th.—Aspect favourable; some comfortable sleep towards morning; two natural motions during the night; pulse 96, a little hard; abdomen a little tense, and some pain on pressure below the umbilicus,—this is increased upon coughing, and when the bowels are moved.

Hirud. x. abdomini, et postea fotus.
Olei Ricini ℥ss. Vespere, rep. pil.

21st.—Since the last report, the pulse has become more rapid: it is 110, and sharp. Has had several attacks of pain in the abdomen.

Rep. Pil. et Hirud. xx. abdom.

She continued to get worse during the day and following night; the pulse increased in power, and became wiry; the abdomen

full and more painful; and skin hot; restless during the night; and countenance not so good. The leeches were repeated.

At 10 A.M., 22d, the catamenia made their appearance, and from that time all the suspicious symptoms began to subside; the pulse became less hard and frequent; the abdomen lost its tension and pain; and the countenance improved.

24th.—The bowels having been purged the last 24 hours, the pills were omitted. She was allowed to take arrow root, sago, &c. Wound dressed, and looking healthy. Although there are now no symptoms to indicate danger, yet the patient cannot be considered safe; there was doubtful active disease going on in the abdomen, which has yielded apparently, in part, to the judicious treatment employed, but also in a great measure to the timely appearance of the menstrual secretion.

Severe Compound Fracture of the Leg—Amputation—Recovery.

Mary Hannell, æt. 70, thin, but apparently healthy, was admitted into the hospital, under Mr. Arnott, November 20th. She was in a state of intoxication, and had been run over by a stage coach, the wheels of which passed over the right leg and the left foot. The right tibia and fibula were projecting through the skin, fractured in several places. There was also considerable hæmorrhage from the large lacerated wound. The injury sustained by the left foot was fracture of some of the metatarsal bones. The woman was very unruly and boisterous, kicking her leg about, and declaring that the bones were not broken, consequently she would not submit to amputation, which was proposed by the surgeon. The friends, however, having consented to the operation, and it being thought prudent by the other surgeons, it was performed, *vi et armis*, three hours from the time of her admission. There was not much difficulty attending the operation, the patient being firmly held down by the assistants. It was found necessary to secure only three vessels, as there was but little hæmorrhage.

The patient was then put into a ward by herself, and an opiate administered. In the course of about two hours she became tolerably quiet, and slept the greater part of the night. The next morning the dressings were removed, in consequence of some hæmorrhage which occurred, and three other vessels, which did not pour out their blood at the time of the operation, tied.

21st.—During the whole of the day the system was much depressed, pulse feeble, and countenance haggard. It became necessary to give some stimulant: wine was allowed with caution, arrow root, and beef tea. This treatment was continued, with but little else, and the patient gradually improved. The following note was made December 4th.

Going on well up to the present time. The stump is dressed every day, and looking perfectly healthy. The woman is calm in her mind, and expresses herself with much gratitude.

Dec. 20th.—The ligatures have all come away, and the stump healing rapidly. Health and strength as perfect as before. The injury of the left leg is going on well.

EDINBURGH COLLEGE OF SURGEONS, ON ST. ANDREW'S DEGREES.

To the Editor of the Medical Gazette.

SIR,

I TAKE the liberty of transmitting to you, for your information as Editor of the London Medical Gazette, a copy of resolutions adopted by the Royal College of Surgeons of Edinburgh, regarding the regulations recently issued by the University of St. Andrew's, for conferring degrees in medicine and surgery *.—I am, sir,

Your obedient servant,

JOHN CAMPBELL,
President.

Edinburgh, 9th Jan. 1834.

There having been submitted to the Royal College of Surgeons of Edinburgh an authenticated copy of "Regulations for granting Medical Degrees, by the Senatus Academicus of the University of St. Andrew's," of date 9th December, 1833; it was resolved:—

1st, That the College experience much surprise in learning that an arrangement has been entered into between the University of St. Andrew's and certain members of their own body—engaged in teaching different branches of medical science, in Edinburgh,—for conferring, in name of that University, degrees in surgery as well as in medicine.

2d, That the College cannot but regard this novel assumption, on the part of the University of St. Andrew's, of a right to confer degrees in surgery, though not possessing in their own body a single professor in that branch of science, as being wholly uncalled for by any considerations of public expediency or utility;—as a violation of the rights and privileges of this College;—

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* A copy of the regulations referred to will be found in our number for Dec. 21, 1833, p. 462.—ED. GAZ.

and as calculated, in as far as a smaller extent of education is demanded of candidates for that degree, than for the diploma of the College, to impede the exertions which this College have for many years been making, to raise the qualifications of those who receive their license.

3d, That, in issuing at the present time a new code of regulations for conferring degrees in medicine and surgery, the Senatus Academicus of the University of St. Andrew's appear to have altogether overlooked the opinion so decidedly expressed by the late Royal Commissioners for visiting the Universities and Colleges of Scotland, viz.:—That the possession of this privilege by Universities, circumstanced as theirs is, is "inconsistent with sound principle; and that the exercise of it, while it is directly opposed to the interest of the public, can be productive neither of credit nor legitimate benefit to those establishments."

4th, That the College,—independently of the doubts they entertain as to the right of a University to delegate any part of its duties or privileges to persons unconnected with it,—cannot but consider it as an unheard of and unwarrantable aggression in one University, to establish an examining board, chiefly constituted of persons residing at the seat of another; and to appoint to that board, teachers necessarily engaged in rival competition with the professors of their sister institution.

5th, That the College cannot overlook the coincidence in time between the promulgation of this new code of regulations by the University of St. Andrew's, and the announcement of certain extensions of the course of study required by the University of Edinburgh from candidates for its medical degree; nor fail to perceive, in this instance, a practical exemplification of the difficulty which (in the want of any general system of medical legislation) must always attend the efforts of public boards, to extend and improve the education of those on whom they confer testimonials; viz. the possibility of the same titles and equal privileges being obtained from other boards on a smaller amount of qualifications.

6th, That the College, feeling, as they necessarily do, a warm interest in the character of the University of Edinburgh, and in the respectability of its medical graduates, conceive themselves called on to express, upon the present occasion, the satisfaction they have derived from the progressive extension of the course of study prescribed by that University to candidates for its medical degree, so as to ensure that its holders shall, in respect of education and acquirements, be worthy of the dignity, and of their connexion with the institution—measures that could not fail to be the more agreeable to the College, from being so completely in unison with those which they have themselves pursued in framing regulations for candidates for their diploma.

7th, That it is to the College a source of much regret, that any members of their own body should have engaged in a scheme for conferring surgical degrees prejudicial to the rights, liberties, and privileges of the College, which, on admission into it, they bound themselves faithfully to maintain and defend,—and which scheme, if it operate at all, must be injurious to those interests which they at the same time undertook to promote to the utmost of their power.

8th, That a dutiful and loyal address be presented to the King's Most Excellent Majesty, praying that, in the exercise of that power of superintendence over the Universities which the constitution has placed in the crown, he will be graciously pleased to interdict the University of St. Andrew's from all further proceedings in this matter, till the report presented to His Majesty by the late Royal Commissioners for Visiting the Universities and Colleges of Scotland, shall have been duly considered by His Majesty's advisers.

By order of the Royal College,

JOHN CAMPBELL, M.D.
President.

Surgeons' Hall, Edinburgh,
4th January, 1834.

COLOUR OF THE GUMS IN AGUE.

DOCTOR BONORDEN, who has had frequent opportunities of treating ague in the neighbourhood of Minden, has observed, that when the fits have been stopped by means of bark, sulphate of quinine, or other medicines, there is always danger of relapse, as long as the edge of the gums, where they are in contact with the teeth, continues to present a dark-red venous appearance. This state of the gums, depending on venous congestion, indicates the existence of a congested state of the internal organs, and where it is not observed, the practitioner is aware that he has to treat a case that will readily yield to medicine. After the paroxysms have been stopped by sulphate of quinine, if this state of the gums continues, it will be necessary to guard against a relapse, by giving occasional doses of the febrifuge for at least three weeks. When, notwithstanding these precautions, the face retains the aguish paleness, and the edges of the gums

continue livid, then it will be necessary to have recourse to the muriated tincture of iron. Dr. B. observes, that this symptom is simulated by the gums, when their edges are unhealthy, in consequence of the accumulation of tartar.—*Hecker's Medical Journ. and Dublin Journal.*

NOTE FROM MR. H. J. JOHNSON.

To the Editor of the Medical Gazette.

SIR,

IN your number for the 4th of January of the present year, you have alluded to an article in the Medico-Chirurgical Review, published *after* the death of the lamented Dr. Dill. You have attributed that article to Dr. James Johnson, or at all events you have hinted such a suspicion. I beg to inform you that the article was written by me. Dr. Johnson certainly did not see it prior to its publication, and possibly did not read it afterwards.—I am, sir,

Your obedient servant,

HENRY JAMES JOHNSON.

8, Suffolk-Place, Jan. 14, 1834.

[The article, the authorship of which formed the subject of our inquiry, was the one which Dr. J. Johnson attributed to Dr. Dill—*mistakenly*, as we proved, and as he has since confessed. In what manner Dr. J. Johnson betters his position by getting his son to acknowledge himself the author of one of the many passages we quoted, we confess ourselves quite at a loss to discover. —ED. GAZ.]

M. DUPUYTREN.

INTELLIGENCE has been received in Paris, that the health of M. Dupuytren has been *completely re-established.* He embarked at Leghorn on the 16th ult., for Naples.

NEW MEDICAL WORK.

A Series of Chemical Tables. By R. Warrington. Oblong, 3s. cloth.

LITERARY INTELLIGENCE.

In a few days will be published, An Investigation into the Remarkable Medicinal Effects resulting from the External Application of Veratria. Illustrated by cases of Affections of the Heart, Tic Douloureux, Rheumatism, Dropsy, &c. in which it has been successfully employed. By A. Turnbull, M.D.

In the press, Pathological and Surgical Observations on the Diseases of the Joints. By B. C. Brodie, Esq. V.P.R.S., Serjeant-Surgeon to the King, and Surgeon to St. George's Hospital. Third edition, revised, altered, and enlarged.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Jan.* 14, 1834.

Age and Debility	36	Inflammation	24
Apoplexy	6	Bowels & Stomach	2
Asthma	7	Brain	4
Cancer	1	Lungs and Pleura	8
Childbirth	3	Insanity	1
Consumption	59	Liver, diseased	1
Convulsions	29	Measles	16
Croup	3	Mortification	3
Dentition or Teething	2	Paralysis	6
Dropsy	14	Scrofula	1
Dropsy on the Brain	10	Small-Pox	6
Fever	6	Sore Throat and Quinsey	1
Fever, Scarlet	8	Thrush	2
Fever, Typhus	1	Tumor	2
Fistula	1	Venereal	1
Gout	1	Unknown Causes	2
Hæmorrhage	1		
Hernia	1		
Hooping-Cough	4	Still-born	14

Decrease of Burials, as compared with the preceding week . . . 42

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Jan. 1834.	THERMOMETER.		BAROMETER.	
Thursday . 9	from 38	to 43	29·33	to 29·23
Friday . . 10	37	43	29·06	29·04
Saturday . 11	36	49	29·26	29 38
Sunday . . 12	39	47	29 16	29 08
Monday . . 13	36	47	29 30	29 38
Tuesday . . 14	37	51	29 34	29 30
Wednesday 15	35	50	29·28	29·41

Prevailing wind, S.W.
Generally cloudy. with frequent rain.
Rain fallen, 1 inch, and ·225 of an inch.

CHARLES HENRY ADAMS.

ERRATUM.—The accidental transposition of a line in our account of the Westminster Society last week, must have made the passage unintelligible to those who did not discover the nature of the mistake. The words constituting the 28th line from the top of the first column, p. 568—viz. "that they represent the *sense*(!) of the"—ought to have formed the 39th line, intervening between the words "simplicity" and "profession:" the continuous reading running thus—"and say (for we have heard them do so in pure simplicity) that they represent the *sense*(!) of the profession."

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 25, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XVI.

DEMONSTRATION OF THE GRAVID UTERUS.

Of the fœtal appendages—all of them highly essential towards the well-being of the ovum, either at the early or more advanced period of intra-uterine life—the

PLACENTA

is perhaps the most important;—the medium of communication between the mother and her infant—the organ through whose means life is sustained, nourishment supplied, and growth perfected.

Anatomical description.—The name placenta was borrowed from the Latins, and signified in their language a cake; it was adopted from its shape. It consists in a flat, spongy, irregularly-circular mass, composed entirely of fœtal vessels—the ramifications of the umbilical arteries and veins, which are connected together by loose cellular substance. It is described as being about a span in diameter—that is, from eight to ten inches; and about one inch in thickness at the thickest part, where the umbilical vessels enter its substance, gradually becoming thinner towards its edges. It generally weighs from a pound to a pound and a half, but varies considerably, its bulk being principally influenced by the size of the child,—sometimes, however, dependent on irregularities having taken place in its own growth, probably the effect of diseased action. It has been supposed to possess absorbents; and Sir E. Home and Mr. Bauer, by the aid of strong magnifying glasses, believed they had detected nerves. I have never been able to satisfy myself as to the presence either of nerves or absorbents in this organ; and most physiologists deny their existence. If it possessed absorbents, they would surely be evident to the eye; and a strong argument against their being nerves is the fact, that no pain is felt by the child on the division of the funis.

It has two faces: the one fœtal, next the embryo; the other maternal, in apposition to the uterus. It is covered on the fœtal face by the chorion and amnion, and on the maternal by the decidua. The fœtal surface has, therefore, a smooth glistening appearance, which it obtains from the two first-named membranes; these are raised into numerous dark-coloured ridges, radiating unevenly from near the centre, and becoming less evident as they approach the edge; produced by the divisions of the umbilical vessels, before they dip into, and bury themselves in the substance of the mass. As these somewhat serpentine eminences are vessels, and the largest of them veins, the deepness of their colour depends on the contained blood shining through their coats, and the transparent membranes covering them. The maternal surface presents a very different aspect; invested with the opaque, floeculent, fibrous decidua, it puts on a fleshy look, and is divided by sulci into a number of irregularly-shaped lobes. Each of these lobes is formed by the ramifications of one branch of the umbilical arteries and veins, on their first splitting; and the vessels of one anastomose but very imperfectly, if at all, with those of its neighbour. The deciduous membrane is carried continuously over from one lobe to the other, like the arachnoid over the convolutions of the brain; and does not penetrate between them into the placental structure,

as William Hunter supposed, who describes it "not a simple thin membrane expanded over the surface of the part, but producing a thousand irregular processes which pervade the substance of the placenta, as deep as the chorion or inner surface; and are every where so blended and entangled with the ramifications of the umbilical system, that no anatomist will, perhaps, be able to discover the nature of their union."

This preparation [presenting it] is one lobe beautifully injected; and you have an opportunity of seeing the minute divisions of the vessels, divested of their connecting cellular structure. It was prepared by being immersed in muriatic acid, so as to destroy a great part of the animal substance.

For the last fifty years, indeed, it has been the custom of anatomists—blindly following previously-inculcated doctrines, without duly observing for themselves—to consider the placenta as actually composed of two different structures, and to describe it as divisible into a *fœtal* and *maternal portion*. The Hunters originated this opinion; and it was a dispute regarding the priority of this supposed discovery that dissolved those ties of affection and interest which had bound together these two illustrious brothers from almost the earliest period of their life.

Theories regarding the utero-placental circulation.—It is indisputably proved that the salubrious change which the fœtal blood undergoes is accomplished in the placental mass; but the immediate mode has given rise to much difference of opinion. It has been explained on four principles. Some physiologists contend that there is a direct communication between the mother and the fœtus, by means of *continuous vessels;* others, that the mother's blood passes by *absorption* into the fœtal system; others again, that the maternal blood is poured into certain *sinuosities* or *cells*, existing in the placenta, destined by nature to receive it; and that, while extravasated in these cells, the fœtal vessels deprive it of what is necessary for the perfection of the embryo; and another party entirely denies the existence of placental cells, and supposes that the same benefits result to the fœtus—its vessels ramifying in close proximity to the maternal arteries—although the mother's blood *never enters* the placenta at all, nor ever leaves her system.

The *first* opinion is by far the most ancient, and seems to have prevailed almost universally, till the commencement of the last century. It has been lately reiterated by Mr. Radford, of Manchester, in a very ingenious pamphlet on the Functions of the Placenta. He states, that the umbilical vein having been injected with size, whilst the placenta still remained attached to the uterus, the fluid "passed freely through the entire structure of the placenta, leaving no part uninfluenced, from the amniotic surface to the uterine; and the entire structure of the uterus was permeated by the injection, some of the sinuses being partially filled, and all of them coloured by it." From this experiment he deduces, that "a direct vascular communication is shewn to exist between the fœtal and maternal systems," and would infer, that the same continuity of canals carried the blood from the mother to the fœtus, as well as from the fœtus to the mother.

He does not, however, rest his inference on his own observation alone, but cites experiments made by other physiologists. Thus, according to his account, Adelon informs us that Chaussier, by injecting the umbilical veins with mercury, not only filled the placental vessels, but also the uterine tissue and its veins; and that Béclard, by means of oil injected into the umbilical vessels, accomplished the same object. He quotes also the well-known experiments of Dr. Williams, who, after throwing oil into the aortal system of a pregnant bitch, on many occasions detected the same fluid in the blood of the pups; and others of Magendie, equally celebrated, in which the odour of camphor, injected into the veins of a bitch, was distinctly perceptible in the blood of the pups removed after a quarter of an hour. The experiments of the two last-named physiologists, however, by no means prove a direct intercourse between the two systems by continuation of vessels; and I cannot help thinking that, in the others, the results were owing to some accidental lesion of parts; since the same trials have been made by very many persons, for the purpose of determining the question, who have deduced opinions diametrically opposite. Other arguments against the direct communication by continuation of vessels are, that the rapidity of the two circulations differs considerably, and that the delicate tissues of the young ovum could not sustain the force of the maternal heart's action, but must necessarily perish from the impetus. Besides, the mother would lose blood through the cut extremity of the funis, if not tied; and the fœtus would suffer a similar loss under hæmorrhage from the uterus before its birth. We know that neither of these occurrences take place.

The *second* opinion, namely, that the blood passed by absorption from each system respectively to the other, would appear to have been first prominently set forth by Rouhault, about the year 1714, who, in a series of dissertations in the "Memoires

de l'Academie des Sciences," entered fully into the description of the placenta, maintaining that it was nothing more than a portion of thickened chorion, and that its spongy tissue was formed by an assemblage of capillary umbilical vessels, not anastomosing with those of the uterus. About twenty years afterwards, Dr. Simson, of St. Andrew's, published the same sentiments; and the illustrious Haller, Rhœderer, Alexander and Donald Monro, all agreed in denying the direct transmission of circulating fluid. Alexander Monro, indeed, entered deeply into the question, and denied the anastomosis, partly in consequence of his experiments by injection, and partly from reasoning on the small size of the extremities of the placental in comparison with those of the uterine arteries, naturally believing it impossible that such a connexion as had been hitherto believed to exist, could be established between vessels of such unequal calibre.

The *third* opinion was advocated by William and John Hunter, was grounded on their experiments by injection, and formed the basis of their theory, so widely promulgated and generally adopted, regarding the two separate portions, fœtal and maternal, into which the placenta was distinguishable.

In the year 1780, indeed, Mr. John Hunter presented a paper to the Royal Society, in which he claimed having discovered the true structure of the placenta, and its connexion with the uterine circulation. He describes the uterine arteries, which are not necessary for the nourishment of that viscus, as making two or three close spiral turns upon themselves, then passing obliquely through the decidua into the substance of the placenta, without any diminution of calibre, and there terminating by open extremities in cells. From these cells arise veins, by large patulous mouths—which are wider than the size of the veins themselves—and entering obliquely the substance of the uterus, immediately communicate with the veins proper to the uterus, and return the blood to the mother's system. These inferences he drew from the result of observation on the injected organ. He found that, by filling the spermatic and hypogastric arteries with red, and the veins with yellow-coloured wax, no part of the injection passed into the umbilical vessels, or the fœtal system; but he discovered lodged in the spongy substance of the placenta itself pieces of red, and of yellow injection, which he traced to have proceeded from the arteries and veins respectively; in other places he found the colours mixed: from this he inferred that in the placenta were regularly formed cells in which arteries terminated, and from which veins took their origin; and that thus the placenta was, indeed, a reservoir for the maternal blood.

Entirely corroborative of such an arrangement, is the description given by his brother:—"For it seems incontestible," he says, "that the human placenta, like that of the quadruped, is composed of two distinct parts, though blended together; namely, an umbilical, which may be considered a part of the fœtus, and a uterine, which belongs to the mother; that each of these parts has its peculiar system of arteries and veins; that the circulation through these two parts of the placenta differs in the following manner:—in the umbilical portion, the arteries terminate in the veins by a continuity of canal; whereas, in the uterine portion, there are intermediate cells, into which the arteries terminate, and from which the veins begin."

And again, he writes, "In separating the placenta from the uterus, which is commonly practicable with the least imaginable force, all the vessels are necessarily torn through; and then each broken vessel has an open mouth upon the inner surface of the uterus, and a corresponding orifice on the outer surface of the placenta."

Not only, however, did Dr. Hunter succeed in injecting the whole cellular tissue of the placenta, by throwing fluids into the uterine arteries and veins, but he also filled the uterine vessels by injecting the *cellular* substance of the funis. He states the mode he adopted in the following words:—"When the placenta and membranes adhere to the uterus, make a slit into the coat of the navel-string; there introduce a blunt probe, and force it into the cells of the adjacent part of the placenta; then withdrawing the probe, insinuate an injecting pipe, and tie it firmly with a broad thread round the navel-string. You will then find that you can by that pipe fill the whole placenta uniformly in its cellular part, and likewise all the venous system of the uterus and decidua, as readily and fully as if you had fixed the pipe in the spermatic or hypogastric vein; so ready a passage is there reciprocally between the cells of the placenta and uterine vessels. It is as much reciprocal, and more largely open, than between the corpus spongiosum and veins of the penis."

From these experiments, then, made on both fœtal and maternal systems, the Hunters considered that the blood of the mother was transmitted into the placental cells, became there lodged for a certain length of time, till the necessary change was effected in the vital fluid of the fœtus, and was afterwards returned back to the mother's body, deprived of a portion of its nutriment and its life-preserving properties. They therefore described two circula-

tions going on in the placenta at the same time—the one fœtal, and the other maternal; the fœtal blood ramifying through the great mass of the placenta, and the maternal being poured into the cells and returned (after it had performed its office of vivifying the blood of the fœtus) into the mother's system.

The doctrine promulgated by Hunter derived much weight from comparative anatomy; for in some of the mammalia—the tribe of ruminating animals—the uterus, when pregnant, throws out from its internal surface small button-like projections called cotyledons, beautifully displayed in this preparation [presenting it], taken from a cow; I presume, about four or five months gravid; into each of which eminences you may distinctly observe the fœtal vessels dipping: and you will also remark, that although the cotyledons—the maternal portion of the placenta, as they are considered—have been here most successfully injected, not a single particle of the coloured fluid has entered the fœtal system. These cotyledons are growths dependent upon pregnancy, subservient to the uses of the fœtus, and disappear gradually when the uterus has relieved itself of its contents.

In this other specimen, also taken from the cow—a continuation of the same series—the same proposition is shewn to hold good conversely—viz. that not even the most subtle injection thrown into the umbilical arteries, or veins, has been received into the uterine system; for you see, although it has insinuated itself into the extreme of every fœtal vessel, the "maternal portion of the placenta" is perfectly free from any tinge.

Bichat's opinion mainly coincided with that of Hunter. He regarded the placenta as divided into two portions, chiefly made up of fœtal vessels, and possessing cells into which the uterine arteries and veins, after having perforated the decidua, are received; but he differed so far as to deny the universality of the cells throughout the placenta, and considered them confined to the maternal surface: and Professor Burns has, quite recently, stood forward as an advocate for these doctrines: but at the same time he states, that "a prolongation of the uterine vessels into the placenta cannot be accomplished by a continuation of the ordinary texture of the vessel, but by the interposition or intermedium of a circle, or portion, not firmer in its fabric than the decidua; otherwise the secundines never could be thrown off."

The *fourth* opinion, which denies the existence of placental cells and the perforation of the deciduous membrane by the uterine vessels, is of late date; and to Dr. Robert Lee, particularly, the honour is due of having combated, and I think successfully, the Hunterian doctrines, which for so many years have been very generally taught in the schools both of Great Britain and the Continent. His investigations seem to have been conducted with great patience and perseverance, and in the true spirit of philosophy. Besides some recent uteri, he himself examined a preparation in the College of Surgeons, supposed to have been put up by John Hunter, and to prove the Hunterian theory; having, by permission of the Board of Curators, taken it out of the containing jar: and Dr. Nimmo, at his desire, made as accurate an examination of the gravid uteri, in Wm. Hunter's collection, at Glasgow, as could be done without removing them from the spirit; which disturbance the authorities of that University would not permit. He has arrived at the conclusion that the deciduous membrane is spread entire over the maternal face of the placenta; that there are no perforations in it corresponding with the apertures in the uterine vessels; that no cells exist in the placenta, and that consequently not a drop of the maternal blood is received into the placental mass. He therefore looks upon the placenta as a single organ, made up entirely of a congeries of umbilical vessels, and not containing any "maternal portion," or possessing any cellular structure; and he grounds his inference on the following facts:—that there is no vestige of the passage of any great blood-vessel, either artery or vein, through the intervening decidua, from the uterus to the placenta; nor has the appearance of the orifice of a vessel been discovered, even by the help of a magnifier, on the uterine surface of the placenta;—that at that part of the uterus to which the placenta has been adherent, there are observable a great number of openings leading obliquely through the inner membrane of the uterus, and large enough to admit the point of the little finger; their edges being perfectly smooth, and presenting not the slightest appearance of having been lacerated by the removal of the placenta;—that when air is forcibly thrown either into the spermatic arteries or veins, the whole inner membrane of the uterus is raised by it, but none of the air passes across the deciduous membrane into the placenta, nor does it escape from the semilunar openings in the inner membrane of the uterus, until the attachment of the deciduous membrane to the uterus is destroyed; proving that there are no openings in the deciduous membrane corresponding with the valvular apertures in the internal membrane of the uterus;—and that the placenta, in a great majority of instances, is separated from the uterus, after the birth of the child,

with the least imaginable effort; which would be impossible if an union by blood-vessels, possessing the ordinary strength of arteries and veins, actually existed. He states what is certainly correct, that those physiologists who have embraced the same conclusions that the Hunters did, do not appear to have examined the gravid uterus and its contents in their natural state, but after fluids had been forcibly injected into the hypogastric and spermatic arteries;—that a laceration of the deciduous membrane covering the orifices of the uterine sinuses followed this artificial process, as well as the formation of deposits of injection in the soft structure of the placenta;—and that this extravasation gave rise to the deceptive appearance of cells. He therefore supposes that the whole of the blood sent to the uterus by the spermatic and hypogastric arteries, except the small portion supplied to its parietes and to the membrana decidua, flows into the uterine veins or sinuses, and, after circulating through them, is returned to the general circulation of the mother by the spermatic and hypogastric veins, without entering the substance of the placenta. The deciduous membrane being interposed between the umbilical vessels and the uterus, whatever changes take place in the fœtal blood must result from the indirect exposure of this fluid as it circulates through the placenta to the maternal blood flowing in the great uterine sinuses.

Some years before I became acquainted with Dr. Lee's opinions, I had begun to doubt the truth of the double circulation in the placenta, and had been in the habit, in this theatre, of expressing my belief that the decidua was no where perforated by large uterine vessels, receiving only those which were destined for its nourishment; and this conclusion was forced upon me, contrary to prejudice and early instruction, by my own observations on those gravid uteri which I had enjoyed the opportunity of examining in the course of my post-mortem inquiries. Since the very able treatise, however, of Dr. Lee has come into my hands, I have been even more assiduous than before in my researches, and they have fully borne out all that Dr. Lee has advanced in regard to the absence of placental cells, the integrity of the deciduous membrane, and the single circulation through the placenta—that of the fœtus.

The same opportunities for inquiry, however, have induced me to believe that it is erroneous to describe the uterine arteries and veins as terminating in *open mouths*. My friend, Mr. Luke, first called my attention to this circumstance, and I will describe to you what we have separately, as well as together, remarked. On separating very cautiously the placenta from the uterus, the greatest part of the deciduous membrane has been detached from the uterine surface, and remained adherent to that of the placenta. As the separation was continued, innumerable, small, excessively tender, fibrous bands of communication between the two surfaces were observed to break, and that with the least possible effort, by the mere raising of the placenta; which were, most probably, the minute vessels supplying the decidua itself. They might be likened in appearance to the filamentous threads of gelatinous fluid that are seen on slowly lifting a flat fish—a sole for example—by one end, from a plain surface. The separation displayed apertures in large vessels, mostly of an oval shape,—some of them sufficiently large at the full period of gestation to admit the tip of the little-finger,—with edges perfectly smooth, bearing no appearance of laceration, which had been quite closed by the apposition of the placental mass. On passing a blunt probe into most of these apertures, it run for some little distance horizontally, just underneath the mucous membrane, and came out at another aperture of a similar character as the former. Prosecuting our investigation, we found that the same thing occurred when the probe was introduced into the first-tried opening and insinuated in the opposite direction. We discovered that very many of the same kind of apertures, on admitting the probe, allowed it in a similar manner to escape through an opening in the same vessel; but that some were too tortuous to permit our carrying the instrument to any extent, while others again were straighter, and two or three successive holes were remarked in their sides; the probe, at these points, appearing naked and uncovered. From the large size of these vessels, the thinness of their tunies, and other characteristics, we had no doubt that they were dilated veins, or, as they are called, *the uterine sinuses*; and satisfied ourselves that the vessels do not terminate in *open mouths*, but continue in their serpentine course close under the lining membrane of the womb, anastomosing most freely and frequently with each other, and possessing in their *sides* openings of a tolerably regular shape, but unequal in size. Whether the same arrangement obtains in the arteries, I cannot inform you; but I suspect not, as all the orifices I have examined appeared to be in the venous coats.

I consider the observations of myself and Mr. Luke have borne out Dr. Lee that there are no cells in the placenta, and that the decidua is not perforated by the maternal vessels; but I think we are at issue with him on one point—namely, that the

vessels do not terminate in an open mouth, but continue their course, and that the apertures are at their sides.

The double circulation then — that of the uterus and that of the placenta — are perfectly distinct from each other, and appear to be carried on in the following manner:—The spermatic and uterine arteries entering the uterus in the most tortuous manner imaginable, are determined, in the greatest number and of the largest calibre, to that spot where the placenta has attached itself; and speedily terminate in the uterine veins or sinuses by larger extremities than is observed in other parts of the body. The veins having received the blood which has, as yet, not become vitiated by the loss of its vital properties, detain it some considerable time in their tortuous and dilated trunks, and reconvey it to the maternal system, deprived of those principles of life and nourishment which it has afforded to the fœtal vessels. While this circulation is being carried on, on the one part, the umbilical arteries running along the funis, carry the child's blood from its body to the placenta, distribute it throughout the mass of the placenta, convey it to the fœtal face of that organ, and apply it in countless, minute, capillary divisions, to the immediate neighbourhood of the uterine sinuses, which are filled with fluid fitted for the infant's wants. Thus changed, the same blood is returned by the ramifications of the umbilical veins, back to the body of the fœtus; not a particle of it being received into the maternal system; not a particle of maternal blood being received into the fœtal system.

Most anatomists even of the present day, I believe, suppose that there is an actual transmission of blood from the one body to the other;—that this, however, is not effected by a direct communication of vessels, but through the medium of absorption. Magendie, and many other physiologists, have demonstrated to a positive certainty, that the extremities of veins possess an absorbing power, and this power is called in to explain the mode of utero-placental vascular communication. I see no reason for supposing it necessary that the fœtus should receive blood at all from the uterus. I can as readily believe that the changes necessary for the life of the fœtus are perfected in the placenta, as I can that the change in the blood of an adult, which is necessary for the continuance of vitality, is produced in the lungs. In the lungs there is no absorption of blood; the fluid is altered in consequence of its proximity to the air while circulating in the air cells; and why may not a similar change be effected in the adulterated blood of the fœtus, in consequence of its circulation close to the pure blood of the mother? One difficulty here besets us: the blood does not only become decarbonized or oxygenated, but it receives also something in addition, by which the growth is continued. The placenta takes up food, in fact, as well as throws off carbon;—it is to the fœtus both as lungs and as stomach. But is it more difficult to believe that the vessels of the fœtus can get rid of carbon and receive nutriment at the same time, than to believe that they throw off carbon only? Both would be equally easy to that Being whose wisdom and power we see in every—the minutest of his works. For what purpose is the complicated but beautiful arrangement of vessels, membranes, and placenta designed, unless these organs were perfectly competent to separate the *materials* of blood from the uterus, without the intervention of actual vascular canals conveying ready-formed red blood? Surely when the ovum is indued with life power is granted to it of selecting from the maternal vessels whatever may be necessary for its nutriment, and assimilating it in a manner analogous to the process of digestion after breathing life has commenced.

The great objection to the passage of the mother's blood into the fœtal vessels by absorption is, that in that case the child would be affected with all the diseases of which the mother may be the subject during the time of pregnancy: thus in jaundice the child must be jaundiced. This we know does not happen; a jaundiced mother will not bring forth a jaundiced child, which she would do if all the constituents of the blood passed from the one system to the other; for we cannot suppose that the fœtal vessels could take up all the healthy blood and leave the bile. The fact of some diseases, such as syphilis and small-pox, being communicated to the fœtus in utero from the mother, has been adduced as a proof of absorption of blood; but I think we can account for this phenomenon without the aid of such a cause. If a child be exposed to an atmosphere impregnated with the effluvia of small-pox, it becomes the subject of disease without the absorption of blood. There is no absorption of blood in connexion when syphilis is the consequence; and we may therefore suppose that these contagious diseases can be communicated from the mother to the fœtus independently of any absorption of blood. I do not mean to deny that the principle of nutriment is absorbed, but I contend against the actual absorption of the whole constituents of the maternal blood by the fœtal vessels.

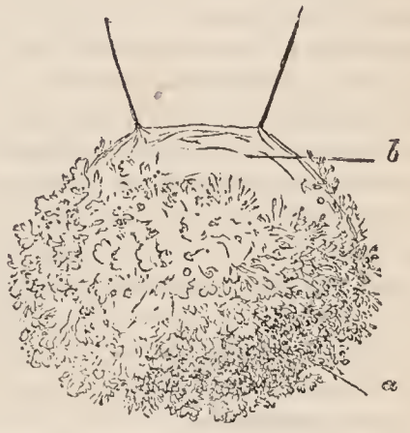
In the ruminating animals the fœtal vessels dip into the cotyledons, and ramify in them not unlike the root of a tree in the soil. In this preparation [presenting

it] from a sheep, you observe numerous *cotyledons;* you see a great number of filamentous vessels shooting from the amnion, which is the fœtal portion; and you see depressions or cups in the extremity of the cotyledons, into which these tassels have been inserted. Now in the cups of the cotyledons there is actually secreted albuminous, nutritious matter, a sort of white lactiform fluid, by which, no doubt, the fœtus is nourished through absorption, in the same manner as the plant is fed by the fluids which it absorbs from the earth. This is a strong argument against the passage of the mother's *blood* by absorption to the fœtal body, because in the ruminating animals a secretion is formed, which could not have been required if the particles of blood themselves passed to the embryo.

We may also call to our aid the analogy of the chick within the egg: it can receive no blood from any external source; and yet from the moment organization is perceived, red blood is apparent, which increases as the albuminous fluid disappears.

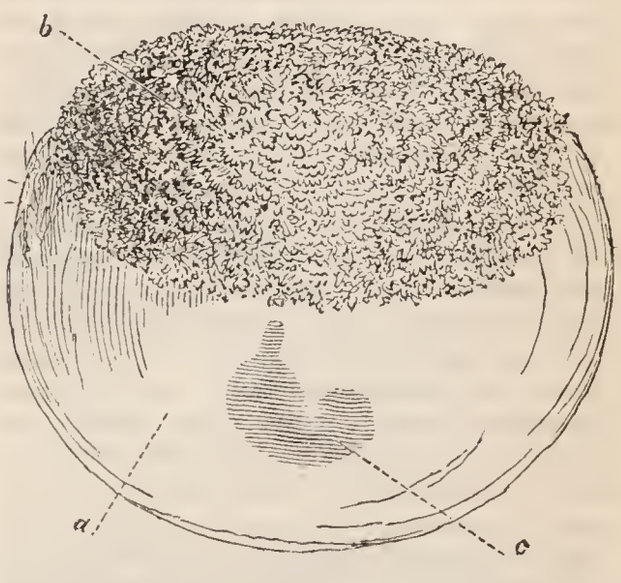
Mode of attachment and situation.— The placenta, then, is attached to the internal surface of the uterus, and this attachment may take place at any one point: it occupies a space equal to its own dimensions. It is described usually as being placed at the fundus; this, however, is not correct. I believe it is most frequently connected, as in this case [presenting a preparation], to the back part of the body of the uterus, rather above the centre;—but there is no one spot of the whole internal surface of the womb to which it may not be applied; and hence we find it in practice adherent to the fundus, the body, the cervix—nay, sometimes situated over the os uteri itself, preventing the escape of the fœtus, and giving rise to enormous hæmorrhage. Velpeau, indeed, in his recent work on "Embryology," states, that of thirty-four females who died during pregnancy, or soon after delivery, at the Hospital of Perfection, inspection of their bodies shewed that the centre of the placenta, in twenty instances, must have corresponded with the orifice of one of the fallopian tubes; in three, was placed anteriorly; in two, posteriorly; in six, at the fundus; and in three, towards the cervix, at the side just beneath the tube. The attachment is by simple apposition: there is no adhesion naturally, no agglutination, no connexion by coagulated lymph except as a consequence of disease—mere simple apposition; the decidua always intervening between the two surfaces.

How formed.— Of the use of the placenta I need say no more, but shall proceed to enquire how it is formed. This is a question also of great interest. Hunter supposed it was elaborated by a simultaneous effort of both the fœtal and maternal vessels; and of course his followers adopted the same views; but it is very questionable how far that opinion is correct. Breschet, supposing it to be entirely a fœtal production, says it is generated at the expense of the chorion. Dr. Lee, from his reasoning, would lead us to suppose the maternal vessels have little or nothing to do with its formation; and I believe myself that it owes its origin entirely to the fœtus. Previously to its appearance, the ovum is seen entirely surrounded by these filamentous vessels, which spring from the chorion and embed themselves in the decidua. As the ovum con-



a, the filamentous vessels of the chorion, which had at an earlier age surrounded the whole ovum, now seen more numerous and thick at this than at any other point: they are becoming collected into one mass for the formation of the placenta. *b*, the membranes denuded of the shaggy vessels.

tinues to grow, the chorion and amnion increase with it in extent; but the flocculent vessels do not increase in the same proportion: instead of surrounding it at all points, they are left, as it were, in one



a, the pellucid membranes, which have increased in extent, leaving the shaggy vessels collected into one mass to form *b*, the placenta. *c*, the embryo, seen through the membranes. This ovum is about nine weeks old.

corner, and, by slow degrees, we find the greater part of its surface merely enveloped by the thin transparent membranes. Bailey, indeed, states, that the "shaggy vessels are removed," and supposes this process the effect of absorption. Burns, also, says the "shaggy vessels of the chorion gradually disappear." I am inclined to think that they are not removed either by absorption or otherwise, but that at a particular period they become collected together into one mass, owing to the increase of the other parts, are then soon connected by cellular substance; and thus the form of the placenta becomes somewhat circular. It is not always that the placenta is round, being sometimes oval, sometimes rather triangular, and at others, though rarely, of an oblong shape, narrow in the middle, like the cipher 8, the two parts being joined by an isthmus, as the common placentæ of twins usually are. It is not always either that the funis umbilicalis terminates in or near the centre; for sometimes it dips into the mass, close to the edge, giving it the form of a battledore. I have also known the vessels of the cord divide into six, eight, or ten branches, splitting upon the membranes, before they arrived at the placenta.

We must not forget in practice this peculiar battledore formation of the placenta, because it is generally believed that, as soon as we can distinctly feel the insertion of the funis into the placental mass, we may be tolerably certain that it is entirely, or nearly, excluded from the uterine cavity, and may then remove it at pleasure by slight traction on the funis. From this specimen, however, you may observe that the portion into which the funis enters might be excluded considerably beyond the os uteri, while the principal bulk of the placenta remained inclosed within the uterine cavity, and might possibly be morbidly adherent to its surface. Under this state of things, if, following such a rule, we were to attempt to extract it by the cord, we should certainly produce mischief, perhaps of an aggravated nature.

Placenta subject to diseases.—I have said that the *natural* connexion of the placenta to the uterus is by simple apposition; but sometimes coagulable lymph is thrown out between the two surfaces — as a consequence of inflammation in the uterine membrane—which glues them firmly together; and this is a frequent cause of danger under labour. At other times we observe traces of diseased action in the structure of the placenta itself; thus it is occasionally found softened to such an extent, as scarcely to bear the gentlest handling without being broken; sometimes it is much firmer than common; at others granules, or spiculæ of bone, are strewed more or less over the fœtal face, and pervade more or less the whole substance; at others again, solid tumors, bearing somewhat the appearance of small schirrous glands, are embedded in the mass; and occasionally it is found hydatidinous. Of these morbid changes, the formation of small bony deposits is by far the most frequent; and a state of adhesion is often connected with them all.

A separate placenta for each fœtus of twins, &c.—In cases of plurality of children, a distinct placenta is formed for each fœtus; but there is only one deciduous membrane surrounding all the ova. These three specimens [presenting them] are triplet placentæ, but there was only one decidua in either case. You observe also a funis for each child. When I say the placentæ are distinct, I mean *in office*, for they are generally connected together at their edge by intervening cellular substance, and when regarded on the maternal surface appear as one mass: yet the vessels of the one do not anastomose with those of the other;—the blood of one child does not pass into the system of the other;—the circulations are perfectly independent:—so that one child may die, and the other live—one may become the subject of disease, and the other be born perfectly healthy. Sometimes, indeed, though very rarely, we do find vascular anastomosis between the two systems, there being only one placenta, as it were, to both the children; though each be enveloped in its separate membranes,—has a separate portion of liquor amnii,—and a separate funis. This is one reason why, in labour, we are recommended to make two ligatures on the funis umbilicalis, and cut between them; lest the case should be one of twins; their vascular systems should anastomose; and the fœtus *in utero* should bleed to death through the cut extremity of the funis of the one already born.

A placenta found attached to the fœtus of all animals.—As a pabulum must be supplied to every living being, both of the animal and vegetable kingdoms, a placenta, or something equivalent, is found attached to the young of every creature, and to the seeds of many plants. In the oviparous races, as we have had an opportunity of observing, two parts performing the function of the placenta of the mammalia—the vessels ramifying on the chorion allow the blood to be changed, as in the lungs, and the vessels circulating on the yolk-bag take up the nutritive matter. The ruminating quadrupeds possess cotyledons, as is the case with the cow and sheep. The mare and sow have no cotyledons. In the monkey tribe the placenta is formed like the human; the cat and other *feræ* have an annular one, running round the ovum, as a belt.

FUNIS UMBILICALIS.

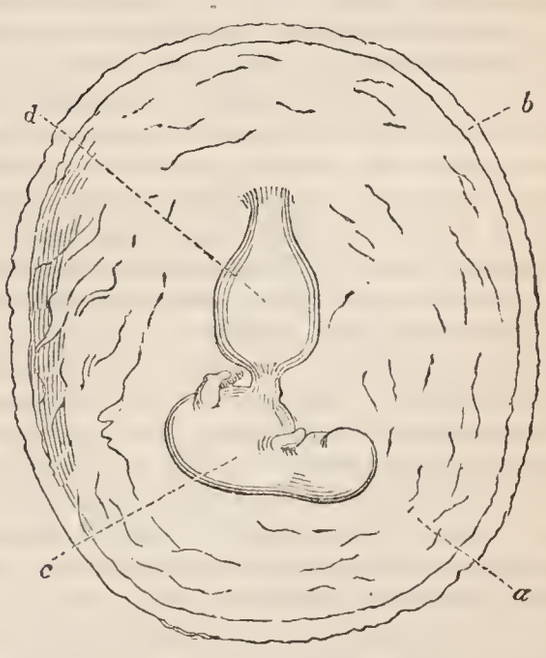
We shall next speak of the *funis umbilicalis*,—the *umbilical cord*,—the *navel-string*. It is the medium of communication between the fœtus and placenta, and is a very neeessary part of the ovum. It is a rope-like substanee, running from the navel of the child into the body of the placenta—the frame-work for the transmission of blood-vessels. It varies much in length; in some instances not being more than six inches, and in others five or six feet. Here are two [presenting them] more than five feet in length; and here another not quite seven ineches; its average length may be about two feet. It varies mueh also in thickuess; and this depends on the larger or smaller quantity of a viseid, semi-transparent, gelatinous matter eontained in cells, whieh makes up the great bulk of the cord. These cells do not eommunicate with eaeh other, as this preparation, where they are injected with mereury [exhibiting it], will shew. The eells, and their contained gelatine, are evidently for the purpose of protecting the blood-vessels from pressure.

Vessels.—The vessels of the funis umbilicalis are two arteries and one vein, ealled umbilieal. The arteries are longer than the vein, being eonsiderably more tortuous; and they generally eontinue their course in a serpentine direction, as in this preparation [presenting it], running round the vein. The vein is greater in its eapaeity than the two arteries together; but as the arteries are perhaps twiee the length of the vein, or more, the quantity of blood aetually eontained in the two arteries at any one time may be nearly the same as in the vein. They sometimes form fantastic convolutions on themselves, giving the external surfaee of the eord a knotty appearanee, not unlike variees in the legs; they will then for some length run straighter, and nearly parallel. Sometimes the funis itself is twisted into a loose knot, shewn in this preparation [presenting it]. The vein possesses no valves;—the arteries do not eommunieate with eaeh other until they reaeh the plaeenta. The arteries carry baek adulterated blood from the body of the fœtus to the plaeenta, and have a very strong pulsation. The vein earries pure florid blood back again to the fœtus. In this respeet these eanals may be likened to the pulmonary vessels. But it must be reeolleeted that the umbilieal vein is freighted with fluid imbued with nourishment as well as vitality. Blundell, indeed, states, that the colour of the blood eireulating through the umbilical arteries does not materially differ from that transmitted by the vein; and he questions whether the same kind of change occurs in the placenta as we observe in the lungs; for he thinks the blood in both the arteries and veins of the funis contains an equal quantity of earbon. This is a point not very easy to determine: and while we know that breathing life eannot be eontinued without some alteration being effeeted through the influenee of the air, and that even aquatie animals are furnished with organs for the express purpose of purifying their blood, it is not too mueh to presume that a similar ehange is required for sustaining the vitality of the fœtus; and that this funetion is performed by the plaeenta.

Although there is mueh variation in their *straightness* or *tortuosity*, it is very rarely that we meet with any variety in the *number* of the umbilical vessels. In this speeimen, however, [presenting it], there is but one artery. Dr. Hunter mentions that he had seen many instances of such deviation, but none in whieh there were two veins: and I do not know of any ease on reeord where either of the internal iliaes sent off two umbilical branches, so as to form three arteries in the eord. Both the blood-vessels and the eells are eovered externally by the amnion and ehorion; the amnion being here, as on the fœtal faee of the plaeenta, external.

The funis is sometimes found eoiled round the neek of the ehild, or its limbs; and this may embarrass us in praetice.

In the earliest period of utero-gestation, when the fœtus is first visible, we see nothing like a funis umbilicalis, but the embryo is attached by its abdomen direetly to the amnion. It appears first about the



a, interior of ovum. *b*, the deciduous membrane thickened. *c*, fœtus, about seven weeks old. *d*, funis umbilicalis, increased in circumference by the deposition of so large a quantity of gelatine as to have compressed the vessels and destroyed the life of the embryo. This ovum remained in utero some weeks after its death before it was expelled.

termination of five weeks: for some time it contains a much larger proportion of gelatine than during the latter months, and the vessels are not observed to become twisted until about the end of the tenth week.

Liable to disease.—The funis is subject to disease:—a varicose state of the vein may take place, or too much gelatine may be secreted; under either of these states the flow of blood may be obstructed, and the child may die, as has occurred in these two ova. Thus disease in the funis may be a remote cause of abortion.

Urachus.—In the quadruped, besides the arteries and vein, there is another duct, running along the funis, called the *urachus*, which is a continuation of the fundus of the bladder, passes out at the navel, and, accompanying the blood-vessels, terminates in a bag between the chorion and amnion, called the *allantois:* and the cavity of the bladder communicates with the allantois by means of the urachus. In the human subject there is no duct, but an impervious cord runs from the fundus of the bladder, and terminates at the navel; *it* is also called the *urachus*, but is not continued along the funis. There is no allantois; and the only part of the human ovum that can be assimilated to the allantoid cyst is the

VESICULA UMBILICALIS,

or *vesicula alba*, stated by Lobstein, though evidently erroneously, to represent the allantois itself,—a small oval bag, not larger, at its greatest magnitude, than a pea, situated between the amnion and chorion, possessing a transparent coat, and containing a small quantity of viscid opaque fluid, whitish, or more generally somewhat of an amber colour. The largest on record is mentioned by Lobstein, and measured six lines in diameter. Its appearance is confined to a particular period of pregnancy, being first seen during the latter half of the second month. The earliest mentioned is by Autenreith, who discovered one on the forty-first day after conception. It gradually enlarges till about the end of the third month, when it begins to dwindle, and soon totally disappears. Both Hunter and Meckel, however, state they have observed it even at the end of gestation, but that instead of being proportionally larger, it retains in that case the same size as it had acquired between two and three months. Owing to its not being observed except during these few weeks, Haller threw a doubt on its existence, by stating, that in the bodies of eight pregnant women whom he had examined, he could not detect any thing like the vesicle as described. It may be with more truth assimilated to the tunica erithroides of the ovum of the bitch than to the allantois, as the allantois is of so much greater size.

Communicates with the intestines.—From one end of this vesicula a short duct proceeds to join the funis umbilicalis, becoming thinner as it recedes from the bag, until, to the naked eye, it is lost upon the cord itself; but by magnifying glasses it may be traced running along the funis, entering the body of the embryo, and eventually communicating with the cavity of the ileum, at its termination; or with the cæcum. The distance between the vesicula and funis varies, being sometimes half an inch, sometimes twice or three times as much.

Blood-vessels.—It is supplied with blood by a distinct artery and vein, called the *omphalo-mesenteric* vessels; the first proceeding from the inferior mesenteric between the intestinal convolutions to the umbilicus, and along the funis; the vein arising from the walls of the vesicle traversing the funis in company with the artery, and finally terminating in the superior mesenteric vein, before that vessel enters the porta. The omphalo-mesenteric vessels shrivel as the vesicle itself disappears. They have been observed, indeed, both by Chaussier and Beclard, in the funis of a full-grown fœtus, dwindled into white cords.

Use.—Its intention seems still a mystery. The best explanation offered of its use is given by Velpeau; he supposes the fluid it contains to be nutritious, and intended to contribute to the development of the embryo until the cord and umbilical vessels are formed. It is, according to him, perfectly analogous to the vitelline sac of the chick, which it resembles in shape, position, its connexion with the intestines, its structure, and the character of the contained fluid. He acknowledges, however, that there is a material difference between the organs; because in the chick the ductus vitello-intestinalis is constantly becoming shorter, until the whole bag is received into the abdominal cavity; while in the human embryo its duct becomes elongated in proportion as gestation advances, and it consequently recedes from, instead of approaching nearer to, the fœtal body.

CLINICAL LECTURE

ON

DISEASES OF THE TESTICLE;

Delivered at St. George's Hospital.

By B. C. Brodie, Esq. F.R.S.

Gentlemen,—My last lecture related to fungus hæmatodes, or medullary disease of

the testicle. But the testicle is liable to other morbid growths.

You hear of schirrus and carcinoma of the testicle. However, I must say, that I never saw in this organ any disease which could be considered as exactly corresponding to the schirrous or carcinomatous disease which you find in the breast, in the pylorus, and in some other organs. I have seen a testicle which bore some resemblance to schirrus, where, no doubt, the disease was of a malignant nature, and which was followed by a tumor of the same structure in the loins; but although resembling schirrus in some respects, it did not resemble schirrus exactly. Occasionally I have seen a testicle, one-half of which was affected with medullary, or fungous disease, while another portion of it bore a considerable resemblance to schirrus.

In Dr. William Hunter's museum, which was formerly in Windmill-street, but is now in Glasgow, I remember that there was a preparation of a testicle which had assumed a structure approaching to that of cartilage. Portions of cartilage were loosely connected to one another, and in some of the interstices between them there were small collections of thick pus. There was no history of the case given in the catalogue; but, if I remember right, it was stated in the catalogue that the disease had some relation to schirrus.

However, all these malignant diseases, no doubt, are nearly allied one to the other; they produce exactly the same symptoms, run the same course, require the same treatment—viz. that of extirpation of the testicle; and it is difficult, or or altogether impossible, to distinguish the one from the other in the living person.

Morbid growths and alterations in the structure of the testicle, not malignant.—There are other morbid growths connected with the testicle which are not of a malignant nature. Sir Astley Cooper has described a disease under the name of "the hydatid disease of the testicle;" but the term does not seem to be a very proper one,—there being, it is true, cysts of fluid in the testicle, but these cysts not having any distinct existence, as is the case with hydatids. He describes this disease as occurring in persons who have passed the age of puberty—that is, being about thirty or thirty-five years old. The testicle enlarges, having an oval shape, is unattended with pain, and the patient suffers little inconvenience from the disease until it has acquired a certain magnitude, when the diseased structure being pressed upon by that very unyielding membrane the *tunica albuginea*, he suffers uneasiness from this pressure. Sir Astley says that, on examining the testicle, you find in it a number of cysts containing serous fluid, of various sizes; and he supposes that these cysts are formed by a dilatation of the *tubuli testis*. The disease, according to his description, does not affect the spermatic cord, does not contaminate the glands in the loins, does not indicate the existence of disease in the general system. It is sometimes mistaken for hydrocele; but whether it be hydrocele or not is easily ascertained by making a puncture. However, it is undoubtedly a difficult thing to distinguish this from other tumors of the testicle previous to the organ being removed. This affection being a morbid growth, of course it is not likely to be under the dominion of medicine, and therefore the testicle must be amputated. But in the cases which Sir Astley Cooper has with his usual perspicuity described, and of which he could learn the result, the disease never recurred after amputation.

I have described the most common variety of morbid growths that occur—those that you are most likely to see; but the variety of morbid growths is endless; and no doubt every one that pays attention to the diseases of the testicle will find every now and then morbid growths existing in it, such as are not described in books and lectures. Here [presenting a preparation] is an example of a morbid growth of a peculiar kind, which was taken from a patient in this hospital. The man was admitted with one testicle enlarged and hard. There were certainly not exactly the symptoms of chronic inflammation of the testicle, nevertheless I treated the case at first as if this had been the nature of the disease, and administered mercury; but mercury made no impression on it. Other remedies having failed, I thought it would be safer to amputate the testicle; and the operation was performed. When the testicle was examined after amputation, the structure of it was found to be peculiar; I could compare it to nothing but very condensed cellular membrane. If you suppose cellular membrane to have been condensed by pressure into a firm solid substance, that was just the appearance which the testicle presented. It was of the consistence of ligament, without its fibrous structure. I was curious to know what would be the result. Between six and twelve months after the operation the man returned to the hospital, having a disease apparently similar just begun in the other testicle. One part had become hard, somewhat enlarged, and the feeling communicated to the fingers was exactly similar to that which had been given by the testicle formerly affected. As an experiment I gave the patient iodine internally, and I believe he rubbed the iodine ointment on the testicle also.

The hardness not only did not increase, but it became in some degree diminished; at any rate the progress of the disease was stopped, and the patient left the hospital with the greater part of the remaining testicle in a sound state.

Wasting of the testicle.—There are some other diseases of the testicle deserving to be noticed. I have told you that there are many cases in which the testicle is enlarged, and also, that when a testicle is affected by chronic inflammation, if the disease be not stopped, the whole natural structure is destroyed, and the testicle wastes. But the testicle sometimes wastes without the structure of it being actually destroyed. I had an opportunity of dissecting such a wasted testicle in this hospital. A man died in whom one testicle was not larger than the last phalanx of your little finger. On examining it, I found the remains of the *tubuli testis* quite distinct, but they could not be drawn into threads as under ordinary circumstances; I found the *epidydimis* distinct also, but of a narrow diameter; the *vas deferens* was pervious throughout its whole length, but much diminished in size. What had led to the wasting of the testicle in this case I know not; we found it accidentally in a post-mortem examination. We had a boy in this hospital some years ago, in whom one testicle was wasted to a very small size, indeed, and in whom the disease appeared to have been the result of the nasty practice of onanism. He had carried it to such an extent as I never heard of in any other instance, and the result was what I have mentioned. He was in the hospital a considerable time, and no remedies seemed to be of any service; but after having gone to a certain extent the wasting ceased. Whether the testicle ever recovered itself I could not learn. I saw another case where both testicles were wasted, and where I had reason to believe that the wasting had arisen from the patient having been excessively addicted to venery. In short, the testicles were over-excited, and over-exercised, in both of these cases, and so they wasted.

Wasting of the testicle will follow inflammation of the organ; but then, I apprehend, it is only when the inflammation has run so high as to destroy the structure of the testicle;—and this case is entirely different from those which I have just described.

Nervous pain of the Testicle.—The testicle is liable to neuralgic affections. A patient frequently complains of pain in the testicle when there is no disease in it. There is a state of the nerves of the part which makes him feel pain it, although there is no inflammation nor any other actual disease; and this is all that we mean when we talk of a neuralgic affection in this or any other part of the body. The disease of the testicle of which I am now speaking has sometimes been called *irritable testicle.* You will find an example of it in persons in whom a large calculus passes from the kidney to the bladder. As soon as the calculus has passed a little way down the ureter the patient complains of pain in the testicle, which is at the same time frequently drawn up, by the spasmodic action of the cremaster muscle, into the groin. When you examine it, you find it of its natural size, natural shape—at first not even tender, although excessively painful: in short, there is a painful affection of the testicle depending not on any disease of the organ itself, but on the influence which the calculus passing down the ureter exercises on the spermatic plexus of nerves.

But similar pains of the testicle may occur under other circumstances. Disease in the kidney will sometimes produce pain in the testicle, although there is no reason to believe that a calculus or other substance has escaped from the kidney into the ureter. A nervous pain in the testicle, like a neuralgic affection in other parts, may occur in consequence of something in the state of the patient's general health. I will mention two cases as examples of this disease. A gentleman, 35 years of age, consulted me under the following circumstances. He had resided for some years in a hot climate, and been subject to occasional deficiency in the secretion of bile. In the year 1815, after a journey in an uneasy carriage, the left testicle became swollen and painful; in fact it was seized with inflammation. Cold lotions were applied, and in a few days the pain and inflammation subsided. A year afterwards he had a similar attack, and since then he had been liable to be affected in the same manner generally at intervals of about a month. In these attacks there was pain in the loins, in the testicle, and in the spermatic cord. After a time the testicle became a little swollen, and then tender, so as to interfere with, but not actually to prevent, locomotion. The pain came in the testicle first, then there was a little tenderness, and then a slight degree of swelling. These symptoms would sometimes subside in the course of twelve hours, and at other times they continued for two or three days. They were generally preceded by clay-coloured evacuations, pain in the head, a sense of lassitude, and when these marks of disturbance of the function of the liver had existed for two or three days, the pain in the testicle used to come on. At other times—that is, in the intervals between these attacks—his evacuations were always of a

proper colour, and the function of the liver seemed to be duly performed. He described the pain as dull and heavy, yet not very severe. In this case it is evident that the original disease was not in the testicle, but in the digestive organs; and that the testicle was operated on through the medium of the nervous system. As to the slight degree of inflammation which shewed itself after the pain had existed for some time, that is no more than what occurs in all neuralgic affections. Even when a renal calculus passes down the ureter, if it remains in that canal for two or three days, the same thing happens; the testicle becoming slightly inflamed, remaining so for a day or two after the calculus has made its way into the bladder.

Another gentleman, a middle-aged man, consulted me under these circumstances. He was seized with a dull, uneasy sensation in the right testicle, the veins of which were slightly varicose; the scrotum generally relaxed. In the upper part of the epididymis there was a small projection, or tubercle, which had not the hardness of a part that had been inflamed, but rather seemed to be the result of some natural structure, as if there had been merely a protrusion of the canal of the epididymis, or a little convolution upon itself more than usual. He said that whenever he touched this particular part of the epididymis, he felt a sensation which he compared to that produced on biting on the exposed nerve of a tooth. Sometimes he had constant uneasy sensations in the testicle even when this tender part was not touched, and at other times he was quite free from all these symptoms. He observed, that if his mind were occupied, he suffered no pain; but as soon as it was unoccupied, and he directed his attention to the testicle, the uneasy sensation in it returned. He was worse during the night than during the day. The symptoms were generally relieved for ten or twelve hours after sexual connexion. Besides this, he was a dyspeptic, low-spirited, hypochondriacal person, thinking himself unequal to exertion, and his mind was during the whole of the day brooding over his complaints. Formerly he had a somewhat similar affection of the left testicle, and when the right became affected, then he observed that the left testicle was relieved.

We cannot doubt that in this case also the disease was altogether a nervous affection, and probably more truly a nervous affection than in the last case, because there was no derangement of any particular corporeal function to which the symptoms could be attributed, and they seemed to arise very much from the state of the patient's mind. In the first of these two cases the nervous affection could be traced clearly to a derangement of the function of the liver; in the other case they could be traced to no physical cause. Many nervous or neuralgic affections, in fact, do arise altogether from the state of the patient's mind. There is no part of the body in which there are not sensations to be discovered which, under ordinary circumstances, pass unnoticed. Let any one think of his shoulder, and he will discover in it sensations of which he would otherwise have taken no cognizance; and if he pays constant attention to them, they will soon amount to pain: so that a patient who has nothing else to do—a low-spirited, hypochondriacal, unoccupied patient—may persuade himself that he has pain in any one part of the body; aye, and at last that he may suffer actually as much as if disease really existed.

You find the same thing more frequently in women respecting the breast. Many a woman thinks she has some pain in the breast, because she has had a friend who has laboured under cancer of that organ; and from this circumstance has been led to pay too much attention to her own breast, until at last she has worked herself up to believe that she labours under cancer also. She may go on thus suffering for weeks and months together, in short, until some one has sufficient influence over her to make her satisfied that her fears are groundless, and then the pain vanishes. I have known ladies frequently come up from the country one or two hundred miles, thinking they have got cancer of the breast, when in fact there is nothing but this nervous pain, which, as I have said before, can generally be traced to the attention which the patient has paid to her own breast in consequence of some friend of her's having had serious disease of the same organ.

SECONDARY INFLAMMATION OF THE TESTICLE.

Inflammation of the testicle occurs not unfrequently as a secondary disease. I told you how it supervenes on gonorrhœa, and it will also in some instances occur as a consequence of a stricture of the urethra. Sometimes it follows the introduction of a bougie, or the rough introduction of a catheter. Here the inflammation of the testicle is sometimes acute, and sometimes chronic. The existence of it, whether it depends on stricture of the urethra, or on the rough introduction of a bougie or catheter, may be easily explained: as in the last case, the end of the instrument may hitch in the orifices of one of the *vasa deferentia*; and with respect to the former, the stricture being almost invariably situated just before the *vasa deferentia*, when the urine cannot get out through it, it is driven back on the orifices of these excre-

tory ducts. In either ease they are liable to beeome irritated and inflamed, and the inflammation may travel along them to the testicles. That inflammation may extend in this manner to the testicles was the opinion of the late Mr. Rose, who paid a great deal of attention to this subject. I met with a case, however, which I think is conclusive, proving the fact that inflammation may extend along the whole continuous surface of the urethra, and vas deferens, to the testicle. A man received a blow on the penis, which caused inflammation of the penis and the whole of the urethra. By and by he felt a sense of weight about the rectum; then the testicle became enlarged, and he was admitted into the hospital, at which time the inflammation of the urethra and penis had subsided, but he complained now of a sense of weight in the rectum. The testicle was enlarged, painful, and tender, and affected with chronic inflammation; and the spermatic cord was affected in the same manner. I introduced my finger into the rectum, and there, in the situation of the vas deferens of the same side with the affected testicle, I perceived an oblong tumor, exactly corresponding with that formed by the indurated spermatic cord in the groin. It was impossible to doubt that the vas deferens had been inflamed throughout its whole extent. This patient got well under the use of mercury and purgatives.

Inflammation of the testicle sometimes occurs as a secondary disease in cases of disease of the kidney. It supervenes also on that kind of inflammation of the parotid gland to which we give the name of *mumps*. This disease occurs generally in young persons, not under the age of puberty, but in boys about that period of life; and sometimes it takes place in middle-aged persons. There is inflammation of the parotid gland, attended with a febrile disturbance of the general system; then the inflammation of the parotid gland subsides, and the patient supposes that he is well, but he presently finds one or both testicles become inflamed. The inflammation of the testicle arising from this cause is seldom severe, and for the most part requires no other treatment than that of keeping the patient's bowels open, and the testicle supported by a suspensory bandage.

The late Mr. Ramsden published a work on diseases of the testicle, in which he endeavoured to shew that in those cases which we call *sarcocele*, the disease generally originates in stricture of the urethra; and that in order to cure the disease of the testicle, we should make the patient go through a course of bougies. In his work he published a number of cases which he supposed to establish this fact. I cannot say any thing about the accuracy of the reports of cases which he published: I can only say they do not at all correspond with what I have met with in practice. Indeed, I am strongly inclined to believe that this theory is fantastic. I do not say that there is absolutely no foundation for it, because I have already told you that inflammation of the testicle is sometimes a secondary disease connected with disease of the urethra; but such cases are comparatively rare, and the cases in which inflammation of the testicle is unconnected with disease of urethra, are very common. Further than this: if there be disease of the testicle arising from stricture of the urethra, or from the rough introduction of a bougie or catheter, I have not found that I could cure the disease by putting the urethra to rights. It signifies not what has produced the inflammation: when once established, it requires the same kind of treatment.

ON DENTITION;

WITH AN

ATTEMPT TO EXHIBIT THE OCCASIONAL PRESENCE OF CERTAIN DISEASED CONDITIONS OF THE BODY,

As connected with its Irregular States.

By Dr. Ashburner.

[Continued from page 560.]

That the train of events constituting the infantile remittent or developmental fever is but a part of that which leads to hydrocephalus acutus—that the one disease is but a lower grade of the other—is a proposition which seems to my mind too clear to require additional illustration. I could detail numerous cases in which death, and the usual morbid appearances after it, have left no doubt of the nature of the complaint. They would all tend to demonstrate the point I am endeavouring to reach.

The symptoms belonging to the acute hydrocephalus are signs of cerebral irritation. When they are all present in a high degree, we conclude that danger to life is present. But parts only of the nervous centre may be affected, and the affection may continue for some time without being propagated to other parts. An endeavour has been already made to shew that strabismus and amaurosis may result as concomitants of developmental irritation. They are symptoms

of water in the head; but when they occur as preliminaries of this horrible disease, they may often be cured by regulating the progress of development about the teeth and jaws, and thus the hydrocephalus, of which they were perhaps the harbingers, may be perfectly arrested.

A little girl, nine years of age, was brought to me by her mother, a very decent woman, whose husband was a bricklayer. The child was the eldest of three living. Two of this woman's children had died infants, both of convulsive fits. The family was strumous. This weakly-looking girl had long had signs of the developmental disorder, but she had lately got headaches, particularly about the fore part, and occasionally she had with them a good deal of sickness.

For four months past, she had often complained of pain in the back of the balls of her eyes. The right eye had, "off and on," turned in towards her nose, and for the last week she was becoming quite blind. On placing her opposite a strong light, the pupil of the left eye contracted quickly; that of the right was but slightly influenced. The light made her head ache. She could not distinguish the number of fingers I held up, but she could distinguish objects in masses, so as to find her way about the room. She put her hand out when she came near a chair or a table, and appeared to see them, though she could not very accurately fix their distances or define their bounds. This girl had lost only one lower central incisor; another was loose. There appeared to be in her mouth no tendency to a very great change about the teeth: she had cut the four permanent molares, and they were large and good teeth. The space between the upper central incisors was much less than it should have been, and the deeper parts of the gums were not so much injected as they ought to have been.

Seven incisor teeth were removed, and the girl had a dozen two-grain calomel pills given her, one to be taken every night, with a caution to discontinue them if the mouth should become sore. A week afterwards the girl was brought again to me. She had lost her squint, and could see very well; but she had inflamed tonsils, and quantities of ropy saliva from her mouth. The gums were not spongy, but the depths of them were much injected. No teeth appeared to be cutting, but the anterior deciduous molares were all four loose. The canine teeth were firm. I directed the discontinuance of the calomel; a blister under the jaw, and a solution of sulphates of soda, potass, and magnesia, in the quantity of half a drachm of each mixed together in three-quarters of a pint of water, every morning; a gargle of nitre, and rose-flower tea. The inconvenient symptoms soon disappeared, but no teeth came for nearly six weeks, when the lower central incisors arrived. In four or five months she had four upper incisors making their appearance, and the two lower anterior molares having become brittle, broke down to stumps. All the deciduous teeth were yellow, with black specks, and dirty, while the four permanent incisors looked white and clean. Her development was proceeding much more rapidly than at first, for now spaces were beginning to form behind the permanent molares.

A young lady, thirteen years of age, with black hair and eyes, was brought to me on account of sick headaches, and a pain behind the balls of her eyes. The pupils were small, but they did not contract very quickly upon exposure to light. She had always a haze before her, and for the last five weeks could not see to read without experiencing pain in her eyes and in her forehead, and about the brows. If she persisted in trying, she became sick. She was very costive. She moaned very much in her sleep, and started a good deal. Her hands were always hot at night, and her throat was generally husky, and often sore about bed-time. She had all her teeth, except the second molaris on the left side of the lower jaw, and the bicuspid on the right side of the same jaw, which ought to have replaced the second deciduous molar tooth, but which could not protrude, for the deciduous tooth still remained. This was removed with great care, for the fangs were almost absorbed. A thick chondromatous gum, over the coming second molar, was freely lanced. Small doses of blue pill, ipecacuanha, and compound extract of colocynth, were directed to be taken on alternate nights. In ten days the patient was quite well.

There must be some good reasons why we are not so successful in the treatment of deafness arising from manifest injury to a nerve, as we are in the treatment of

affections of the eye. I have seen several cases of deafness partially cured by the removal of a tooth which compressed a wise tooth, and prevented its progress. I have known instances in which deafness was much relieved by the removal of a compressed, useless, badly and late developed wise tooth. But the lesion, probably, of the chorda tympani, from pressure of the dental nerve, takes place to too severe an extent before the connexion of the morbid phenomena is discovered; and the drawing of the tooth in fault is had recourse to at a period too late to be of much benefit.

It has been my lot to see numerous cases of inflamed tonsils, concomitant with the cutting of wise teeth; and I have seen four cases of profuse ptyalism, concomitant with the same event. Not a grain of mercury had been taken by these patients, although the fœtor very much resembled that of mercurial ptyalism.

The fœtid breath to which some people are subject during the progress of the dentition of the last molares, is a very curious matter for investigation. With many it is the only symptom of developmental disorder, while with others it is joined to other signs, and has been a part of the remittent fever accompanying the irregular growth of the earlier teeth. With some it resembles the mercurial breath, while with others the odour is more analogous to the secretions from some of the glandular structures near the anus. The symmetry of the two extremities of the body is more than a fanciful anatomical dogma. (See Meckel, Man. d'Anat. tom. i. p. 31.) The consideration of the facts connected with this subject may at some future time lead to important pathological results.

A gentleman, thirty-three years of age, began to cut his wise teeth. His health was hardly affected by the process. He was rather more costive than he was wont to be, and found that wine and malt liquor had the effect of giving him a headache. He was more sleepy than usual. His breath became insurmountably offensive, and it continued in this state for nearly two years, by which time he had cut the last tooth. After that his breath was not at all tainted.

The fœtid breath is a symptom of cerebral irritation, as well as other parts of the developmental disorder, and like any other individual of the distinctive family of signs, it is not necessarily present in all cases. Sometimes it is present without any of its companions. These signs of cerebral irritation it has never been pretended are confined as coincidences to a development of the teeth and jaws. The brain and nervous system may manifest the existence of some anormal condition,—some irritation, by the presence of a few or more of the symptoms of fever in concomitance,—in coincidence with a disordered condition of skin, or with a disordered state of the dermoid part of the stomach, alimentary tube, gall bladder, urethra, bladder, or other mucous surface; or they may evince an idiopathic irritation, the consequences of which may be disorder in some other part of the body. Specific alterations of structure in various organs are sometimes preceded by a peculiarity in the fœtor of the breath, and often, in such cases, there is some sign, however slight, of mental disturbance. Those who study the diseases of women would do well to look into the physiology of this subject. The disorders of the organs of reproduction, particularly in the female, exert a curious influence on the brain and nervous system. Whatever may be the concomitance of local disease with signs of cerebral irritation, the fœtid breath, which may vary much in its character of odour, is generally attended, more or less, by some alteration in the condition of the patient's mind. The *degree* of caprice, of melancholy, of low spirits, of fretfulness, of irascibility, perhaps of pride, may of course vary; but however slight may be the degree of mental disturbance, it is always present, more or less, when fœtid breath manifests cerebral irritation. In the child with the "infantile remittent fever," as well as in the woman of adult age, the brain is apt to indicate a peculiar state of disorder by the presence and coincidenceof these symptoms. Now and then, a married man, who is weak enough, or brutal enough, not to exercise the sympathy and tenderness which a woman requires most especially in this state, may by his selfish and unfeeling conduct have produced one of two consequences,—fainting fits, with wandering neuralgia and spasmodic twitchings of the flexor muscles, the first *degree* of epilepsy,—or, a complete alienation of mind.

The question as to the organs which emit the fœtor, is not yet, to my satisfaction, settled. Some dyspeptics, whose

occupations are sedentary and studious, cough up from the chest small lumps of yellow mucus, which emit, in a concentrated form, the peculiar fœtor of their breath. Others, who have not a single decayed tooth, but who may be preparing to cut teeth, have sometimes the fœtor attached to the juices about the gums.

There is, no doubt, a variety in the odour, as well as in the condition of the health, of the individual labouring under the symptom of fœtid breath.

A young gentleman, of light hair and eyes, of a strumous temperament, seventeen years of age, had a faint and very peculiar odour of breath. His mind was excited by several harassing considerations, and he was attacked by delirium. Violent conduct, and a desire to destroy numerous objects that came in his way, were the manifestations of aberrant intellect. In other respects his spirits were extremely high, and he was full of fun and joyousness. The uncontrolable desire of mischief rendered it advisable to put this young man under restraint. One of the most experienced physicians of the metropolis decided upon the hopelessness of a cure in this case; and the opinion was founded upon a range of facts that it falls to the lot of very few to be conversant with. I one day persuaded this patient to allow me to use my gum lancet freely upon some large spaces of gum which covered developing dentes sapientiæ. In a week afterwards I heard that he was quite well.

In the "Memoire sur les diverses espèces de deviations dont est susceptible la derniere molaire, &c. par Alp. Toirac, Docteur en Médecine, &c.; 1828," at page 6, appears this passage:—

"M. Esquirol, à qui j'ai communiqué cette observation, m'a rapporté qu'une dame atteinte de folie avait été amenée à sa maison de santé, et qu'il l'avait rendu à la raison, en favorisant, par une incision cruciale, la sortie d'une dent de sagesse. C'est, autant que je puis me le rappeler, le célèbre M. Duval qui pratiqua l'operation."

Is the fœtor attendant on the irritation coincident with anormal development of the teeth and jaws much modified in its characters after the period of puberty? Up to the age of thirteen or fourteen, the nervous system is busy in attending to the development of the teeth and jaws, as well as to the other organs of nutrition. After that period the organs of reproduction occupy some of its attention; and in considering the influence which anormal developments exert on the nerves, we are led to give a due share of importance to the new organs which are now to superadd their functions to the complicated organism of the individual.

An opportunity has been taken to analyse those spasmodic affections to which persons labouring under anormal trains of development are liable before the age of puberty, and to which others may have been liable, though failing to exhibit the complication arising from the growth of a new set of organs. Fœtor of breath may be present as a coincidence of various complaints about the pelvic viscera, and its characters may vary a good deal without involving *much* irritation about the brain. Suppose a *complicated* anormal state of development, are there peculiar symptoms indicating such a state? If the development of the teeth be not completed at or about the fourteenth year to the full complement of twenty-eight teeth, is the development of the organs of reproduction retarded? or, is this train of growth attended by inconvenicnces denoting the existence of cerebral irritation? and are the signs of such cerebral irritation different from those attendant on a simple, uncomplicated, anormal development of the teeth and jaws?

Dr. John Clarke (Commentaries, p. 76) has well observed, "that fewer inconveniences attend on dentition, when the process goes on slowly, than when it is more rapid." A retarded development, in fact, though occasionally abundantly inconvenient, is not generally attended by the same train of evils, and especially about the period of approaching puberty, as a hasty growth of the teeth. The development of the organs of reproduction may be retarded, but in most cases the consequent errors of health are not very serious. Signs of the developmental disorder may be present, but for the most part they are slight in degree, or of transient duration. The inconveniences arise generally from a want of harmony in the development of the osseous and of the dental structures, by which the trains of growth belonging to two different septennary periods are mingled in some confusion. An asthenic condition results, with perhaps a start in growth of the whole osseous

fabric. The individual grows taller, and if country air and other invigorating circumstances be afforded, a balance of growth results: the teeth are put forth with a sufficient space in the jaws to allow for the gradual progress of the wise teeth. If, however, a different train proceeds; if the asthenic condition continues, unrelieved by circumstances tending to invigorate the frame, the patient droops. The tendency to erect attitude gives way to a stoop; the head comes forward; the chest contracts; and for a year or two the individual appears to be undergoing "a great change of constitution." A few or more of the signs of developmental disorder affect the individual. The teeth come through; asthenia and cerebral irritation remain. Then what has cerebral irritation to do with anormal dentition? There must be some other cause for it. There is, indeed. The chest has become too small for the organs of respiration; the trains of growth in various parts of the body are deranged; and obstructed development is accompanied by cerebral irritation: but the commencement of the train of disorder has been perhaps originally in the organs of nutrition. As far as I have been able to examine into the subject of the manifestations of cerebral irritation occurring as signs of complicated series of development, I should conclude that there is always a predominance of manifestation of the irritation belonging to one set of organs or the other; and that there are at first few signs of complication. If the teeth be not fully developed, there may be a retardation of growth in the reproductive apparatus, and the suffering existing in the dermoid system, irritation may be communicated to the absorbent and glandular systems. Atrophy may result from mesenteric mischief thus induced; but all this while the development of the reproductive organs is suspended. The determinations of growth in particular parts, are very curious. The laws of normal development being suspended, the normal trains of progress in one set of organs appear to be arrested, in order that the anormal developments of other organs may proceed. Geoffroy St. Hilaire's law of one organ being developed in an undue excess at the expense of some other, may thus be carried out to the proposition, that if the nisus of growth affect an organ obstructed and bound down in the course of its development, other organs suffer in the volume and epoch of their developments. In some cases in the female, the growth of the teeth being complete, menstruation commences: perhaps in a short time it may be suspended, in order that a precocious development of the last molares may proceed. There may not be sufficient energy in the system to complete this portion of growth: it requires a consentaneous development of the jaw bones, which not proceeding, the teeth in vain attempt to emancipate themselves. The jaws, perhaps, take a start in growth; if they do, the inconvenience is not so serious; if they do not, a very common constitutional disturbance is a giddiness in the head; weak eyes; sometimes dimness; ringing in the ears; sometimes deafness; a sense of weight, or a sense of heat, compared by one young lady to *inward chilblains*, at the upper and front part of the crown of the head. It may sound very strange to some who imagine themselves pathologists, and who confuse their own intellects by taking certain narrow and limited views of the morbid anatomy of the organs in the thorax, to state that "consumption," or that disease which they have now and then, by the aid of their stethoscopes, declared to be incurable, may, in numerous instances, be most advantageously treated as the result of irritated nervous centre. A hectic fever, with evening exacerbations; much accelerated pulse; cough, attended by abundant mucopurulent expectoration; pain in the left side, with sense of weight and stricture across the chest; night sweats, and extreme emaciation of the body; œdema about the ankles, and diminished secretion of urine, constitute a case that has been condemned as hopeless: such a case has been successfully treated by a strict attention to the allaying all signs of cerebral irritation;—the true explanation of the principle of that treatment which succeeded in Scotland, in the hands of a reverend divine. But an atrophy, with cough and other signs of developmental disorder, is not really consumption or pulmonary phthisis; it is often difficult to say when the fatal disease has set in. The confidence with which some persons pronounce a prognostic is not always a sign of wisdom from experience: some cannot learn from this teacher. Phthisis pulmonalis and atrophy are often concomitant; they

are frequently coincident with the same trains of anormal development. The teeth and jaws, the bones of the thorax, and the spine, may have simultaneously an anormal development. We may observe the vicious configuration of all these parts in an individual, in some cases, without being able to indicate the source of the faulty trains of growth. There are many cases in which a consentaneous bad configuration of the body is present, in which the nisus of development in the four wise teeth considerably aggravates all the present inconveniences. In a girl asthenic from faulty configuration, development having proceeded to an extent to disturb the balance of her powers, an atrophy may accompany the effort at developing wise teeth. The developmental disorder, perhaps with not *all* its symptoms, accompanies the illness. Menstruation may have commenced; it ceases. If the nisus in the teeth be quieted for a while, the menstrual flux returns. The patient is for a time better, for the normal train of development, that of the generative organs, is proceeding; but the dental nisus is again active, and again the former trains of disorder are present. A very amiable and interesting girl of fifteen, with dark hair and grey eyes, of a nervous temperament, had menstruated once. It was supposed in March last that she had caught cold, for a very painful stiff neck ensued. The sterno-cleido-mastoideus, and a part of the trapezius muscles of the right side, became quite rigid. The spasm increased, and the occipital portion of the trapezius felt like a bony tumor, as large as an egg; the pain increased; a precocious development of the wise teeth had begun. Calomel and antispasmodics, Dover's powder, &c. having afforded no relief, the gums were freely lanced. The operation had some immediate beneficial effects; but this young lady's teeth being very unusually large, and the jaws not growing with sufficient rapidity for the space required by the coming teeth, so much pressure operated to keep them back, that they could not come through. At the end of a fortnight another severe attack of the rigid spasm caused the poor sufferer agonizing pain. The gums were again scored, and the health was a *little* improved. About this time the influenza attacked her, and the cough was very severe. Nearly five weeks elapsed before she recovered from this new complaint, the painful wry neck continuing all the while. Blisters, tartar emetic ointment, and rubefacients, were had recourse to without benefit. An endeavour to promote absorption of the gum, by scoring it with the gum lancet, gave most relief. The poor patient became extremely emaciated, although the appetite was good, and the food appeared to be well digested. In July the left arm became paralyzed; and this was followed, in August, by paralysis of the other arm, on one knuckle of the hand of which there had for some time been a steatomatous encysted tumor, that now became inflamed, and discharged its contents with much pus and some slough. The atrophy became extreme; by degrees the legs lost their power. Under the idea that the developing teeth, which appeared to be advancing most rapidly in the lower jaw, required space, the two second molares were extracted. The benefit was not striking, but a burning pain, and sense of weight on the top of the head, about the frontal and parietal bones, becoming very urgent, it was thought advisable, on the 16th of September, to remove the corresponding second molar teeth in the upper jaw. The operation was succeeded by immediate relief to the head, and a partial restoration of the power of moving the fingers of the left hand.

14th October.—Notwithstanding the cutting of the wisdom teeth, her mother observes that the debility and emaciation increase. Before the teeth were removed, a great quantity of coloured fluid and ropy saliva came from the mouth when she slept. This ceased immediately afterwards. The teeth being developed, a change has taken place in the urinary organs: a great quantity of urine passes, and upon several occasions small quantities of blood have been discharged by stool. Occasional symptoms of hysteria, especially the spasms about the throat, with low spirits, have been present lately. She has had a reddish-coloured discharge, of very peculiar odour, from the vagina, for some time past. When the process of shedding the teeth commenced, about seven years of age, she had a leucorrhœal secretion, which continued off and on at times for about seven years, and then ceased.

January 10th.—This poor young lady has continued to suffer from the extreme emaciation to which she is reduced. An

old medical friend of the family, now retired from practice, but well known by a high character for extensive acquirement and great moral excellence, was kind enough to afford me his assistance on a visit to this patient; and she has derived great benefit from his suggestion of the application of a circular cushion, filled with horse-hair, a material easily cleaned, which has been the best means hitherto employed of removing pressure from an extensive slough on the hip.

Since October the urine has varied in quantity as well as in character: it has been sometimes mixed with blood. In December the abdomen swelled; a severe pain in the hypogastrium continued several days; the urine became scanty; the bowels relaxed; and mucus, blood, and pus, were said to be mixed with the fæces. The mother thinks it very probable that the purulent discharge mixes itself in flowing from the vagina with the feculent matter. Sometimes the fæces have the appearance of pure bile with mucus. The appetite continues good, and the food is relished. There has been pain in the left hypochondrium, extending up the side of the thorax, and acute pain in the head whenever the patient is moved. Repeated blisters, and occasional large doses of laudanum, give some relief from all this suffering. Had I been bold enough to sacrifice the four molar teeth which obstructed the development of the wise teeth at an earlier period, I feel convinced I should have saved this young lady a world of pain and other evil.

It is often found that when there is a mingling of the developments of one septennary period with those of another, what is vaguely called a sympathy appears to exist between the generative organs and the skin. The one set of organs is not unfolded, so as to evince the maturity of the age to which the individual has attained, for the skin is tardy in some of its stages of progress; perhaps the teeth are not so forward as they should be; perhaps they are kept back from a want of room in the jaw, the bone of which, instead of becoming more loose, more cellular, more spongy, remains hard, compact, and contracted. In such cases one is never surprised to find some diseased condition of skin, with occasional fever, or with fits, or with some other symptoms of developmental disorder.

A young gentleman, sixteen years of age, with dark hair and eyes, soft large pupils, fine skin, of a nervous temperament, tall and slender make, had been placed with a tutor preparatory to his entrance at college. He was very assiduous at his studies, and it was supposed that several attacks of heat and flushing, followed by profuse bleeding at the nose, resulted from too intense application. There can be no doubt, if signs of cerebral irritation be present, working the brain by either intense thinking or by anxiety, vexation, or grief, must aggravate, instead of tending to allay, the mischief. Upon inquiry, it was found that this young gentleman had for nearly two years past been subject to *sick headaches*, which sometimes incapacitated him for the exertion of study for a week together. When these paroxysms seized him, he would rest his head upon his hands, placed upon a table, or lie down across some chairs, in a very dejected state of spirits, and be disinclined to speak to any one. Occasionally a desire to vomit seized him, and if he could bring some bile off his stomach, he felt relieved for several hours. Calomel, with other cathartics, seemed to be very appropriate medicines, for they relieved him in a shorter time than other remedies. In the day his hands were burning, in the evening they were damp. At night he was flushed; and soon after he got into bed he perspired so much as to make the mattrass on which he slept very wet. His sleep was accompanied by apparent dreams, of which he himself was unconscious. He started and moaned a good deal through the night, and on one occasion became a somnambulist, having, about three in the morning, walked through two adjoining chambers, rested his hand upon a table for three or four minutes, and then returned to his own bed-room. He was quite unconscious of having done this. He was constantly picking his nose, and had the habit, which was irresistible, of picking out inequalities on the surface of the paper in books he read. A cough, dry, hard, hollow, and loud, seized him in paroxysms, unaccompanied by pain in the chest, or by pain upon pressure in the hypochondriac region. His breath was generally very offensive; his tongue either loaded and yellow, like chamois leather, or whitish, with interspersed red papillæ like raspberries and cream. He did not *complain* of bad digestion, though he ate a small meal

with such rapidity and eagerness that his food was bolted. He was so habitually costive, that he had frequently been eight days without a motion, and had repeatedly gone without one for a fortnight. If he had a natural tendency, without the aid of medicine, to go to the closet daily for a few days, he observed that his evacuations were very hot in passing, and his skin itched considerably: in fact, he was attacked by the petechial urticaria, which generally lasted, in the shape of large wheals about the abdomen, scrotum, nates, and thighs, for three, four, or five days, and left in their places purpura urticans. Herpes præputialis often accompanied this eruption.

This young gentleman was unusually nervous when among strangers. Upon these occasions, a slight stammering, which was habitual to him, was converted into a distressing impediment in his speech, and any unusual continued excitement produced an intense headache. Puberty is said to have taken place at fourteen. His beard and whiskers are hardly perceptible. The tone of voice is soft, but manly.

Upon examining the mouth, the fauces were observed to be unusually red; the velum palati and tonsils flabby and enlarged. In the jaws and teeth, the development was anormal. Some set of circumstances, of the nature of which we are at present quite ignorant, had operated to retard the due course of growth: that arrangement which ought to have been complete at or before fourteen years of age, was not yet established. The normal trains of growth had been subverted, and the type of structure belonging to the second was mingled with the type of the third septennary period. The time of life which ought to be devoted by the constitution to the gradual improvement of the organs of reproduction, was partly engaged in the duties of unfolding the teeth and jaws; and unfolding them not regularly—not normally—for this young man was found to be cutting two teeth on the right side of the jaws, and one in the upper jaw of the left side, while the space in the lower jaw, behind the first molar tooth, was hardly sufficient for a tooth that had not yet passed. The incisor teeth in the lower jaw rode one over another. All the first molares were becoming blueish, and the teeth behind them did not take their proper alignement, but assumed a station rather external to the tooth before. On the left side, the posterior bicuspid had lately been extracted, in consequence of toothache. The gum in the lower jaw having been freely and crucially incised, the patient was enjoined to keep his bowels open, and to have a strict observation of the colour and consistence of his evacuations. To regulate these, he had occasional pills, compounded of blue pill, calomel, ipecacuanha, and cathartic extract; and habitual pills to take daily—composed of rhubarb and extract of jalap. He was told to use the warm shower-bath in the morning, and frictions with a huckaback towel over the chest and back, after having sponged these parts with warm vinegar and water, at night. He had directions to employ his mind in amusing trains, and not to study hard.

Five months elapsed before I saw my patient again. The summer had been spent with some relations, in excursions round the southern coast of England. He had gained flesh, was much improved in health, and had almost lost the habit of stammering. The second bicuspid in the upper jaw on the right side had plagued him, and he had had it extracted. The two first molares were decaying fast.

[To be continued.]

INFLUENCE OF DIET ON PORRIGO.

To the Editor of the Medical Gazette.

SIR,

SINCE the date of my last communication, I have ascertained some facts, for which, previously thereto, I had not had time to make the requisite inquiry. These rather tend to illustrate my former observations, whilst, so far as they go, they sufficiently attest the peculiarity of the diet employed in Christ's Hospital. The diet of the army consists of three-quarters of a pound of meat (the meat served to the army is weighed with the bone included), and one pound of bread, daily. Every day, also, the men eat vegetables, for which the regimental messes subscribe, and which, estimated undressed, is perhaps not less than a pound to each soldier. Now, on calculating the animal matter entering into

the diet of Christ's Hospital, (butter, cheese, and suet inclusive), and estimating the meat, like that issued to the army, as undressed, it appears that each boy has a fraction more than ten ounces daily, taking the diet of one week as an average, and this, although on two days out of the seven he has no meat at all. Further: the butter and cheese, forming part of these ten ounces, are not subject to any waste from previous preparation; and I exclude the consideration of broth and pease-soup, which not only contain animal matter, but which, whenever allowed, are unlimited. In this calculation I have allowed fourteen ounces of milk weekly, and three ounces of suet for the plum-pudding, which are the only points on which there can be error; and these allowances appear moderate. The boy of Christ's Hospital and the private soldier have about the same quantity of bread, taking the average of a week,—the former some small fraction more, and the bread probably more nutritious, as that issued to the army is very heavy in general, and contains a proportion of bran.

I next submit to your notice the diet-scale of the Military Asylum.

Breakfast — milk-pottage: milk, one-sixth of a quart; oatmeal, one ounce; bread, one-twentieth of a quartern loaf.

DINNER.

Sunday—Beef, roasted, 8 oz.; potatoes, 12 oz.; bread, one-twentieth of a quartern loaf; beer, ½ pint.
Monday—Pudding, (suet, 1½ oz.; flour, 6 oz.); potatoes, 8 oz.; beer, ½ pint.
Tuesday—Beef, 8 oz., potatoes, 12 oz. (both stewed); bread, one-twentieth of a quartern loaf; beer, ½ pint.
Wednesday—Soup, pease, 1 gill; potatoes, 12 oz.; bread, one-twentieth of a quartern loaf; beer, ½ pint.
Thursday—Beef, 8 oz.; potatoes, 12 oz. (stewed); bread, one-twentieth of a quartern loaf; beer, ½ pint.
Friday—Pudding, (suet, 1½ oz.; flour, 6 oz.); potatoes, 8 oz.; beer, ½ pint.
Saturday—Mutton, 8 oz.; potatoes, 12 oz. (stewed); bread, one-twentieth of a quartern loaf.

SUPPER.

Sunday — Bread, one-twentieth of a quartern loaf; cheese, 1½ oz.; beer, ½ pint.
Monday—Bread, ditto; milk, ½ pint.
Tuesday—As Sunday.
Wednesday—As Monday.
Thursday—As Sunday.
Friday—As Monday.
Saturday—As Sunday.

N.B. The meat is estimated as taken from the butcher, including bone.

A proportion of the very small children on 6 oz. of meat.

I am far from wishing to represent the preceding diet as one altogether worthy of imitation, but it at least contains a good quantity of vegetable matter, and evinces a recognition of the propriety of some difference being made with respect to age; you will further observe that the children have meat but *four* times a-week. I apprehend that investigation will discover a corresponding diminution in the extent and obstinacy of porrigo, but at present I have no details to offer you on which I can place reliance, not having been sufficiently fortunate to find Mr. S. Lawrence at home on the only occasions on which my time has allowed me to visit the Asylum. I have understood that gentleman, however, on former occasions, to say, that sometimes they have a great deal of porrigo, but that in general it is not very obstinate; that they treat it by "mild diet, cleanliness, &c." His letter to me, enclosing the scale of diet, observes, only that "at present we have but few cases of porrigo, and those very slight, but at different periods it has prevailed extensively. The treatment has varied according to the different stages of the disease, and I have in vain sought for specifics in this complaint."

The diet of St. Ann's Society School, which refers to the establishment at Brixton only, the town boys not being fed at the cost of the institution, is as follows:—

Number of boys, about 97.
Breakfast—*Bread with milk* and water.
Supper—Bread and cheese and bread and butter alternately, except on Tuesdays, when they have bread and treacle.

DINNER.

Sunday—Roast beef, plum pudding, and potatoes.
Monday—Boiled mutton and potatoes.
Tuesday—Boiled rice, with about ½ oz. of sauce (butter, flour, and sugar.)
Wednesday—Boiled beef and potatoes.
Thursday—Suet dumpling and pease-soup.

Friday—Roast mutton and potatoes.
Saturday—Bread and cheese.

The quantities were only stated to me generally, thus: potatoes unlimited; bread, about ½ lb.; meat (estimated raw, and including bone), scarcely less than 8 oz.; butter, ½ oz.; cheese, 1¼ oz.

I should mention, that the consulting surgeon to this charity has nothing to do with the management of the boys except in particular cases when the apothecary judges his assistance necessary. I have therefore taken no part in the formation of the above scale, if I except the substitution of water for table beer, which I sanctioned some time since in conjunction with the other medical officers. With regard to porrigo, Mr. Laming, the apothecary to the establishment, says, that it has not appeared at Brixton for some time; that about twenty or twenty-five of the town boys have had it; that he generally treats it by the application of the tinct. ferri muriatis; and that generally speaking he regards it as a very inconsiderable nuisance. On visiting the Brixton establishment, I find from the mistress that she does not recollect any case of scald-head since she has held the situation (about two years). The master informs me, that when first the Brixton establishment was instituted, they tried the diet of Christ's Hospital, but that it disagreed very much with the children, and that many had bad heads when he joined the institution (about three years since). I cannot vouch for the accuracy of these statements: Mr. Laming does not mention them. Mr. Peters, the former apothecary, has been some time deceased; and I have not been able to communicate with Mr. Jones, the late secretary. I regret much that the space occupied by these documents obliges me again to forego comment. I was anxious to have finished my communication by a few remarks, but I dare not occupy more of your space without special permission. To me these facts carry their own comment. I do not say they are conclusive; but I have not the least fear but that they will be rendered so when I shall have obtained more accurate details. I beg, however, that I may not be misconstrued as saying that the treatment of porrigo depends *wholly* on diet. My experience does not justify me in saying thus much; but those who refer to the book can scarcely misunderstand me, unless, indeed, like a late writer in the Medical Quarterly Review, they hinge their criticism on a typographical error*. If a surgeon think he have discovered an improved method of treating a disease, I hold it to be his duty to communicate it, however indifferent he may be to its adoption. And although the treatment of porrigo cannot be considered as unimportant, yet it is very much so when weighed with the fact, that many diseases of undoubtedly constitutional origin are not so indicated by the ordinarily recognized, and (which have therefore been too frequently considered) the *only* manifestations of constitutional disturbance.—I have the honour to be, sir,

Your very obedient servant,
GEORGE MACILWAIN.

9, Argyle-Place, Jan. 15, 1834.

ON THE

ANTAGONIST POWERS OF THE PUPIL AND CILIARY CIRCLE,

In accommodating the Eye to different distances.

BY WM. MACKENZIE, M.D.
Waltonian Lecturer in the University of Glasgow.

WITH regard to the accommodation of the eye to different distances, we have several hypotheses; such as—

1. Changes in the convexity of the cornea;
2. Changes in the quantity of aqueous humour;
3. Changes of place in the crystalline lens;
4. Changes of figure in the crystalline lens, produced either by the motion of its own fibres, or by the action of its capsule.

We have little more than one fact, established by observation, with regard to this question—viz. the contraction of the pupil when near objects are viewed, and its expansion when the eye is directed to objects at a distance; and this we readily ascertain by inspection of the healthy eye, in any living individual.

I wish to mention another fact, which I have observed in the dead eye, and

* In the table of contents, by an error of the press, the word "*un*constitutional" occurs instead of "constitutional." This the editor of the above journal has gravely adopted as a matter of criticism.

which bears upon this question of accommodation.

In some eyes after death we find the pupil small, and in others we find it large. Now, in those eyes in which we find the pupil small or contracted, we find the ciliary circle—that is, the termination of the ciliary processes around the crystalline lens, expanded, so as to be separated in a considerable degree from the lens; but in those eyes in which the pupil after death is large or dilated, we find the ciliary circle contracted round the edge of the lens, or even intruding a little on the anterior surface of that body.

Soemmering, in his magnificent section of the eye*, has represented the ciliary circle as I find it when the pupil is contracted after death; and Home has represented† it as I find it when the pupil is expanded, or rather he has caricatured nature under those circumstances, and brought the ciliary processes more in front of the lens than they are ever seen to be. But the facts, as I have stated them, derive additional confirmation from the apparently contradictory representations of those two anatomists.

The pupil, then, and the ciliary circle, are antagonists. While the pupil contracts, as we direct our attention to near objects, the ciliary circle expands; and while we look at distant objects, the pupil expands, and the ciliary circle contracts around the lens. To what purpose? To displace the lens backwards, is the theoretical answer. Can it be moved backwards? Can the vitreous humour be so compressed, as to permit of a displacement of the lens? This question I shall not at present attempt to answer.

Mr. Travers‡ has formed a notion of the action of the ciliary circle directly the opposite of mine. He thinks the pupil and she ciliary circle contract together, and expand together. I believe them to be antagonists.

Let the inquirer into this subject examine, in the meantime, the preparations of the eye in any anatomical museum to which he has access. In those preparations which exhibit the anterior half of the tunica, with the lens *in situ*, he will find sufficient grounds, probably, for examining the truth of my alleged facts, in the recent subject. He will there, I doubt not, find the views above stated, and which for some years past I have explained in my lectures, completely confirmed.

Glasgow, Dec. 25, 1833.

* Abbildungen des Menschlichen Auges, tab. viii.

† Phil. Trans. 1822. Plate vi.

‡ Synopsis of the Diseases of the Eye, page 66. London, 1820.

TREATMENT OF DRY EARS AND DEAFNESS.

To the Editor of the Medical Gazette.

Sir,

I hasten to give all the information in my power to Auditorius, concerning the causes and treatment of deafness, resulting from a deficient secretion of cerumen in the external meatus of the ear.

I am, sir,
Your obedient servant,
W. Martin Coates.

20th January, 1834.

I need hardly mention that the lining membrane of the meatus auditorius externus and membrana tympani, in its most perfect state of health, is covered by a moist yellow substance very much resembling bees' wax, but of much softer consistence. This cerumen is secreted by numerous glands, called ceruminous, placed underneath the cuticular lining of the meatus. The ducts proceeding from these glands open near the roots of delicate hairs found in this situation. When this secretion is either too abundant or deficient, deafness is the result. It is with the latter state of things we have to do.

Deficient secretion of the cerumen is produced by various causes. A common cold may excite inflammation in the glands, and induce a dry state of the meatus. The well-known symptoms are sensation of heat and itching in the part, and ear-ache; the natural cure is effected by a copious secretion from the part. As to the medical treatment, a pediluvium, with a warm bed, is all that is necessary.

I have found it very often accompanying a dry tongue and skin, with scanty secretions from the bowels. Until these morbid conditions are removed, no local applications are serviceable; and when the intestinal canal and skin

are brought to act properly, there is seldom more to do.

But there is a dry state of this part strictly local (and I suppose this is the case to which Auditorius particularly alludes), and which has always appeared to me to have arisen from an indolent state of the ceruminous glands. The symptoms are more or less deafness—sometimes to a great degree. When the patient happens to catch a sound, it is sharp, and causes unpleasant noise in the ears for some time after. On examining the part the cubicular lining is white, and quite destitute of the ordinary secretion. The following case illustrates pretty well the affection, and the mode of treatment which I have found most successful:—

Charlotte Osborne, aged 22, has been deaf nine months, the complaint having gradually arrived at its present intensity. Present symptoms, May 14, 1833: very deaf of both ears, but more particularly so of the right. Of a costive habit; tongue white and dry; of heavy aspect, and inattentive behaviour. Left ear quite destitute of cerumen; the right has rather more than its usual proportion. Her ears were syringed with soft soap and moderately warm water; and she was ordered—

Pilulæ Hydrargyri, gr. iij. omni nocte.
Magnesiæ Subcarbonatis, gr. viij.;
Rhei Pulveris, gr. x. omni mane.

May 19th.—Tongue clean and moist; bowels freely open. The left ear is evidently worse; the right is improved somewhat. Having syringed both ears, I applied, by means of a small camel's hair brush, to the left membrana tympani, a very minute portion of the following ointment, rendered soft by the admixture of a little almond oil.

Unguenti Hydrargyri Nitratis Diluti, 3j.; Unguenti Cetacei, 3iij. Misce.

21st.—Has had some slight pain in the left ear, but can hear much better with it; the right continues to improve.

The ointment to be applied to the left membrana tympani every other morning.

July 28th.—She has continued this treatment ever since. She has become of ruddy complexion, lusty, and lively in her behaviour. She expresses herself as hearing as well as she ever did.

I must observe, that the cure was retarded considerably by a severe cold caught during the latter part of the treatment.

There is another species of deafness, differing in its cause from the above, but very often mistaken for it. It arises from a faulty secretion from the ceruminous glands, and occurs now and then with, or alternating with, strumous ophthalmy. In these cases there is a good deal of irritation and noise in the ears. On examination of the external meatus there is no deficiency, but occasionally an unnatural dingy colour of the cerumen. This affection occurs ordinarily in persons accustomed to unwholesome food, and destitute of the common comforts of life. As the causes can seldom be removed, we treat the disease under very unfavourable circumstances; however, I have generally succeeded in curing this affection for the time being, but on the patient returning to his old habits, like all scrofulous complaints (for I believe this to be almost always dependent on a scrofulous diathesis), it generally re-appears.

The first indication is to correct the secretions from the bowels, which are generally of an unnatural character, by mild mercurials; I generally use the hydr. c. creta in small and repeated doses. The second, to diminish the irritability of the secreting membrane; this I do by the application of a solution of the argenti nitras, in the proportion of one grain to the ounce of distilled water. It was the following case that led me to adopt this practice in the first instance.

Francis Murray, aged 16, placed himself under my care July 10, 1833, for strumous ophthalmia, with great vascular opacity of the cornea, and intense vascularity of the conjunctiva lining the lids. I leeched, blistered, and purged him with no good effect; and having observed how powerful the effect of the nitrate of silver in allaying irritation, I ordered him this lotion, to be dropped into the eye three times a day:—

Argenti Nitratis, gr. ij.; Aq. Destillatæ, 3j. Misce.
Pulv. Hydrarg. c. creta, gr. v. bis die.

July 20th.—The inflammation has subsided to a slight blush of the lower lid; the lymph has been absorbed; there is no intolerance of light, which was great at the commencement of the treatment. Upon the disappearance of the ophthalmia he became deaf. On

examining his ears, the quantity of cerumen was natural, but it had a greenish appearance; he had tingling and constant noise in the ears.

His ears were syringed twice with no benefit; it then struck me that the argenti nitras might be of service here; for this affection of the meatus appeared to me somewhat analogous to that of the conjunctiva.

I ordered the solution of it, of one-half the strength of that which had been applied to the eye, to be dropped into the ear twice or thrice a day, and waited the result with anxiety. It answered my most sanguine expectations, for in less than a week his hearing was quite recovered. I have since lost sight of this patient, so do not know whether this affection has ever returned; but the same treatment has been successful in several other cases.

LONGITUDINAL FRACTURE OF THE RADIUS.

To the Editor of the Medical Gazette.

Sir,

The following curious case was lately related to me by a friend in the country, the surgeon who attended it. I took an outline of its history for my own case-book, and, deeming it extremely interesting, I requested permission to communicate it to the professional public through the medium of your pages. If you consider it worthy a place in your journal, and can afford room for it in your columns, you will oblige,

Sir,

Your obedient servant,

W. M. Hughes, M.D.

Wellington-Street,
London Bridge, Jan. 7, 1834.

G. K——, rather tall, and slightly made, æt. 20, while standing on one of those ladders which are permanently fixed to the sides of buildings, unfortunately lost his footing, and would have fallen to the ground, had not his right fore-arm (previously passed above and behind a board very close to the building) supported him for a short time, till he regained his standing position by means of the other hand. At the moment of his descent, he states that he was sensible of a distinct snap in his arm. On reaching the ground, however, his pain was not great, nor was any obliquity or distortion discoverable in the affected limb; but as the physician and surgeon had only a short time before passed the house, and as, from the decided snap, a conviction existed in his own mind and in those of his friends that fracture had occurred, a messenger was dispatched after the professional gentlemen, requesting their attendance. On a very minute examination of the arm, they were unable to detect any indication either of fracture or dislocation, except that one of them fancied he once, but only once, indistinctly perceived something approaching to crepitus, and that considerable pain was produced by pronation or supination of the hand, though none existed on flexion or extension of the arm or wrist. Leeches were ordered to be applied (somewhat abundantly, as he had previously suffered a little from hæmoptysis), together with evaporating lotion; and in a short time, only five days from the fall, so little local disturbance of an inflammatory nature existed that a stimulating liniment was employed. About a fortnight after the accident (during which he had suffered little or nothing, and at the latter part of which he was able to follow his usual country occupation), as he was buttoning his trowsers on the left side, with the affected arm, he was much surprised to find that it was misshapen; a considerable projection existing at the central part of its external surface. When the alteration had been effected he was unable to state, as he had felt no sudden pain or other indication of change: all he knew was, that when last seen or observed by himself, the arm was even and of natural appearance, and that then it was irregular on its surface and different from the other. He immediately set off to his surgeon, and, with considerable alarm, exposed his misshapen limb. It was now easily ascertained, and distinctly evident to the medical attendant, that a bone *had* been broken, but in a very singular direction; that, in fact, a very large splinter, amounting to nearly half the thickness of the radius, and to four or five inches in length, had been separated from the outer side of the central part of that bone, and produced the

large projection on the arm. Splints and bandages were now used, so as to decrease the space between the shaft and splinter of the bone as much as possible, and continued for three weeks; after which, a liniment and bandage were applied: by which means the unnatural projection has now (six weeks after the accident) much decreased; the two portions of bone have become firmly and immoveably united, though a longitudinal depression or furrow still exists between the central inch or two, and the shaft of the radius; and his arm is as useful to him as before the accident, being affected with no pain in whatever position it is placed or however it may be employed.

Remarks.—A doubt may very probably arise in the minds of many, whether fracture had really taken place in the case of which an outline is given above. This doubt may, I conceive, be very reasonably supported on the following grounds: that the nature of the accident was such that it is highly improbable that a fracture would be caused in the direction mentioned, and that if the bone were broken at all, it is natural to suppose it would be transversely, or very slightly obliquely; that no, or scarcely any, evidence existed of fracture upon minute examination at the period when it would be most distinct—viz. for the first fortnight after the fall, and particularly during the first investigation of the injury; that it is unreasonable to suppose that so large a mass of bone should be moved from its connexions without the knowledge of the patient, and without causing considerable pain; that the internal structure of the bone might have been injured, though it was not itself broken; that the projection on the arm arose from the deposit of ossific matter under the periosteum, and that the decrease of this projection, or node, was effected by absorption induced by the pressure of the splints, &c. In answer to these objections, I beg leave to submit the following observations; first, however, acknowledging my perfect inability to explain *how* a fracture in the direction stated could be produced by the accident mentioned above. The absence of the marks of fracture soon after it took place, is, I conceive, explicable from the improbability of any attempt being made (on account of the rarity of the case) to grasp the two portions of bone; or, supposing it attempted, the extreme difficulty of doing it so effectually as to cause them to rub against each other, and thus produce crepitus, as in the case of transverse or oblique fracture; from the long supinators and the extensors of the wrist above, the tendon of the former, together with those of the extensors of the thumb and the quadratus muscle below, keeping the splinter in close approximation with the shaft of the radius, and from none of the flexors or extensors of the arm acting upon the separated portion. Independently also of the indistinct crepitus once thought to be observed, the correctness of the diagnosis subsequently formed is supported by the pain caused by pronation and supination of the hand; as the pronator longus, if not the quadratus, would have a direct tendency to separate the splinter from the radius, and its action would thus become a very probable cause of increased pain. If so large a splinter had been separated *suddenly* from its close approximation with the bone whence it had been previously broken, I should find it difficult to believe that it had taken place without considerable pain to, and much more without the consciousness of, the individual; but it is, I think, possible, nay highly probable, that the projecting bony mass, though caused by fracture, had arisen gradually by the elongation of the soft cartilaginous connecting medium of the two surfaces, and was produced by the muscles (particularly the pronator teres and the superficial flexor of the fingers) acting upon the splinter after the inflammatory pain had been reduced by leeches and cold lotions. That the projection was not caused by ossific matter deposited under the periosteum, nay, that fracture had actually occurred, is, I think, proved by the mass being moveable upon the shaft of the bone at two weeks—by its becoming closer approximated, and being firmly fixed to the radius six weeks after the accident. From these considerations, I think there can be no doubt that the radius had been broken, and in the direction specified; notwithstanding the difficulty of explaining how the injury could be effected, under the peculiar circumstances of the fall.

MEDICAL APPRENTICESHIPS.

PLAN OF A BETTER SYSTEM.

To the Editor of the Medical Gazette.

Sir,

Since I last had the opportunity of addressing the medical public through the medium of your valuable journal, I have read, with some interest, the observations of Milo, in defence of the system of medical apprenticeships.

It is not my intention to write an answer to each of his individual objections; not that I agree with him, but because neither controversy or victory in argument is my object at present: moreover, I do consider that such passages as the following are too ridiculous and trifling to be worthy of serious refutation, particularly when coming from the pen of one who has so mean an opinion of either his course or arguments that he is ashamed to sign his own name.

"And the 'moral feeling,' I cannot help thinking, of the opponents of apprenticeships, is neither more nor less than the morbid pride which renders an inexperienced and headstrong lad impatient of all restraint."

My sole object being to elicit truth, I shall at once proceed to state why I still maintain the opinion that apprenticeships are not the means which are best calculated to advance the scientific education of the student.

Milo states that I appear to be unacquainted with the apprentice of the respectable general practitioner. The observations which I made, regarding the treatment of the apprentice being little better than that of a servant, does not apply to such cases as he refers to. I will allow that the apprentice is enabled, in some instances, to study the practice of medicine during his apprenticeship; but when this is the case, there appears to me to exist this strong objection to even that system of education,—that the knowledge is not based upon a proper foundation. The student learns to treat disease so far empirically that he is not yet acquainted with the organs of which the human frame is composed. His knowledge of medicine is like that of a quack, independent of anatomy. And supposing that he has seen a good deal of medical practice previous to his coming to the hospitals, and has really acquired some knowledge of the treatment of disease, he is then very liable to look upon the study of anatomy as unnecessary, and that it need only be acquired by cramming in sufficient quantity to pass the examinations at the Hall and College.

The student who commences the study of his profession from that point at which alone it ought to be commenced by those who wish to regard it as a scientific pursuit—namely, with anatomy and physiology, or the structure and functions of the human frame—soon discovers that he has entered on a wide field of interesting research, one which possesses beauties that it is worthy of a struggle to obtain, and that it is something more than a mere trade which is to be learnt to obtain a livelihood.

First impressions go a great way with the ardent and inquiring mind of youth, and I believe that the strong interest which is inspired by the scientific study of the profession is a much surer guard to the steady conduct of a young man, during his studies at the hospitals, than the previous bodily restraint of an apprenticeship. But allowing that such interest were not sufficient, and unfortunately in too many cases it does not prove so, is it not as easy to place him under the roof of persons competent to control his conduct while he is attending the hospital, as when he is engaged in mixing drugs?

I will now proceed to lay before the public an outline for a course of studies to be pursued by the student who is intended to practise the medical profession; and as I consider his education, previous to his coming to the hospital, of the highest importance, I shall commence with that. The plan of no single individual is likely to be perfect; still I hope that it will be considered better than the mode pursued at present.

Let the student, on his quitting school, which is generally at the age of 16, and at which period I will suppose him thoroughly versed in Latin and Greek, instead of being sent to an apothecary's shop, be obliged to commence a course of study which shall embrace the French and German languages, mathematics, and natural philosophy.

At the age of 18, oblige him to pass an examination on these subjects, and thus obtain a certificate that he is thoroughly acquainted with them. Such certificate shall entitle him to enter upon the study of the practice of medicine, and register his name accordingly.

In all the large provincial towns in Great Britain there is an abundance of scientific men, not only in our own profession, but in the church and the law, who would be fully capable of forming a council for the purpose of conducting such an examination, and the student would be thus saved the expense of coming to London. Such an examination might be conducted so as to confer honour on the student, or merely a certificate of competency.

The student having thus obtained his first degree, should commence his studies in October with learning descriptive anatomy, by attendance on lectures and by dissecting, and also the principles of surgery. The study of anatomy and surgery ought solely to occupy his attention for the first six months. In the May following let him learn pharmacy and materia medica, not merely by attendance on lectures, but by actual labour in the dispensary of a general practitioner or of an hospital. Let him also commence his attendance on the practice of an hospital, dispensary, or workhouse.

In the following October he might again commence the study of descriptive anatomy, extending it to general, morbid, and comparative. In the following summer, chemistry, medicine, medical jurisprudence, and botany. The two following years I think ought to be spent in London, in attendance on the practice of the hospitals; his winters being chiefly devoted to practical anatomy and physiology — his summers to practical medicine, and surgery. I should then allow him to present himself for examination, but I would not do so until he has practically attended to the study of his profession for four years.

I will conclude these observations with the hope that they may be canvassed in the same spirit that they are written—namely, an anxious desire to improve the education of the medical student, and in the attempt to do so pursuing a straight-forward course, neither looking to the right or the left; not considering that the regulations of institutions ought to be respected for their *antiquity*, or that laws which were great strides on those which preceded them, ought to be regarded as unalterably perfect.—I remain, sir,

Your obedient servant,

SAMUEL SOLLY.

15, St. Mary-Axe,
Jan. 16, 1834.

REFORM IN THE COLLEGE OF PHYSICIANS.

To the Editor of the Medical Gazette.

SIR,

YOUR last number contains an announcement which I read with great pleasure—viz. that the Royal College of Physicians has at length resolved on repealing certain unjust bye-laws which acted injuriously on the profession, as well by what they ordained as by what they prohibited: viz. by admitting to the Fellowship Oxford and Cambridge Doctors only, and thus, to a certain extent, preventing medical students from preferring for their professional studies those schools in which competent medical instruction could be had. Would that this resolution had come even a few years earlier; how much scandal it would have prevented! But repentance should be encouraged, not rebuked. I hail, therefore, the resolution of the College, as a proof that even legalized exclusiveness and irresponsibility have proved insufficient to extinguish those sentiments of justice and liberality so natural to highly-educated gentlemen; and as a proof that the cultivated mind, however for a time misled by habit, is sure at length to discover and return to the right path.

The notice in your number for January 18th, if I rightly interpret it, assures us that the College has determined on removing the stigma from extra British and dissenting Doctors, and placing all M.D.'s, with practically unimportant distinctions, on the same footing of eligibility to the medical senate; of removing, in fact, the great grievance of the quondam Licentiates and the source of all the unhappy and mutually injurious disputes between them and the College. This, then, will be a capital reform, and a breach in the muniments of the old conservative policy, through which must flow many other changes. Allow me shortly to point out three of these, which I consider immediately necessary to complete the work so well begun.

1. The necessity of an immediate large addition to the Fellowship.

2. The policy of offering to the Licentiates some share in the business of nomination.

3. The propriety of making residence in the metropolitan district a condition of admissibility to the ballot.

There are, I think, about 150 Licentiates resident in London, exclusive of the Fellows. In glancing over the College list of their names, I meet with thirty or forty of more or less note, each rather exceeding than falling short of the average ability or eminence of the present Fellowship, and a few amongst the most distinguished as authors, practitioners, &c. in the medical profession. Others there may be unknown to me, of merit equal to that of the majority of those I allude to, but I have no hesitation in saying that I could point out a score of Licentiates whose accession would add greatly to the strength and real dignity of the Fellowship. An immediate incorporation, therefore, of Licentiates, to no less amount than some score, at least, will, in my opinion, in all sound policy be inevitable: and I would go further—Oxford and Cambridge have enjoyed a long and ill-deserved preference, while the *elèves* of other schools have laboured for some century and a half under an impolitic and unjust exclusion. Having at length determined on concession, let the Fellowship, therefore, grant in no niggardly spirit, with no reluctant hand, but generously and with a good grace: above all, let there be no black-balling from personal hostility, or through resentment for political offences. Let there be a complete amnesty for the past. Let the right hand of fellowship be held out to all that at this moment possess comparative eminence, whether as authors or practitioners: let there be no peddling about former professional rank, place, or mode of graduation, personal peculiarities, &c. &c. &c. Let the Fellowship bear in mind the difference between a public body and a private association, and always remember that in proceeding to the ballot the question is not whether the candidate is likely to prove an agreeable companion, but whether he may be expected to turn out an efficient colleague—a comparatively zealous and able co-trustee, or the reverse. I think, therefore, that an addition to the College equal to one-half of the present resident Fellowship, would by no means exceed the just and reasonable expectation of the Licentiates; and I think further, that in favour of existing Licentiates, the further concessions would be politic—viz. that the name of each should, if not previously proposed, be, at the request of the party, submitted to the ballot after having attained a certain standing; say seven years.

2. With regard to the second head above named, I think the policy of some concession is very obvious. Your notice of the College proceedings informs us, that such additions as may be considered necessary to the governing body or fellowship, are to be made by election, and, I presume, selection, from the licentiates; from which I gather, that the business of incorporation is, not only in its essentials, but also in its accessories and preliminaries, to remain, as at present, in the hands of the fellows. Assuming my interpretation to be correct, is it wise, I ask, now to avow the wish to remain in that respect *in statu quo ante bellum*, to retain in all its entirety that arbitrary power of admission and exclusion which reformers maintain to have at once tempted and enabled the College to abuse its privileges? The licentiates may argue, no more honourable men than the present are ever likely to fill the fellowship, yet they have hitherto uniformly abused their power to the exclusion of nearly all but their own kindred of Oxford and Cambridge; and now, in the same breath in which they proclaim themselves reformers, they announce their intention of retaining amongst their machinery the mainspring of all mischief in public bodies—namely, self-election. How can we confide in them? They are to continue the same men, and armed with the same irresponsible power, and liable to the same sinister influences. Election consists of two parts—nomination, and voting in: the latter part is vested exclusively in the fellows by the Charter; but the business of putting in nomination might wholly, if the College so pleased, be entrusted to us. Such a boon would indeed be a pledge that the advances of the College were sincere; that it had abandoned its old aristocratic pretensions, and was willing to admit us to an equality in the social scale. But the notice in the Gazette does not warrant us to suppose that it will be considered in any degree necessary to consult our feelings, or at all to inquire whom of our body we think worthy to be elevated into authority over us. Even the comparatively unimportant step of offering us the use of the library, museums, &c., in consideration of a small annual subscription, or on other mutually convenient conditions, to which most, if not

all, would agree—a measure which would be profitable to themselves as well as gratifying to us—is no where alluded to; so that they would appear still, reformers though they are, to think us, as a body, unfit associates, and a lower class in the profession ! !

Seeing, then, that the repeal of the bye-laws removes obstacles merely, alias confers eligibility, but affords no guarantee against the partialities and antipathies of the balloting-box, I do not see how our position is materially altered: before, we could not, except by special and rare favour, be admitted to the ballot at all; now, any of us may get his name proposed, but if unaided by agreeable manners, extensive acquaintance, &c. &c., with what chance of success?

I think that if the College wish to be thought sincere by the public, and to win the confidence of an injured and alienated profession, they will take some step with a view to gather the opinions of the licentiates previously to proceeding to the ballot. Nor could there be any difficulty as to the means to be used for collecting the views of the licentiates: circulars to all residents in the metropolitan districts (or even to all such, wherever resident, as should wish, and might, without inconvenience, be consulted), issued a few weeks before the day of election, stating the number of vacancies declared, and requesting lists of names equal to or double that number, would effectually answer that purpose. Should a majority of licentiates not answer to the call, the right of nomination might remain entire in the hands of the fellowship.

3. The College should consist of two sections—viz. governors or fellows, and licentiates or members. The functions of the latter being negative, would require no restriction as to residence. Not so those of the fellowship: the fellows are virtually officers or trustees, and should consequently be physically and morally capable of discharging their official duties.

It is obvious, therefore, that residence in the metropolitan district should be a *sine quâ non* condition of election. To extend the fellowship to residents in the provinces, colonies, &c., is to degrade it from an important and dignifying office to a mere title or honorary distinction. I think, therefore, that for the future no non-resident member should be eligible to the fellowship.

An early insertion of these suggestions would much oblige, sir,

Your obedient servant,

AMICUS CURIÆ.

London, 20th Jan. 1834.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

ANIMAL MAGNETISM.

Rapports et Discussions de l'Académie Royale de Médecine sur le Magnétisme Animal; avec des Notes Explicatives. Par M. FOISSAC, D.M.P. Balliere.

"In the year 1783, M. Bergasse formed the plan of a subscription, to the effect that one hundred persons should lay down 2400 francs each, in order to secure the independence of M. Mesmer. The zeal with which some of the most distinguished individuals came forward upon this occasion cannot be too much admired. In the course of a few months Mesmer touched (*toucha*) above 340,000 francs."—*M. Foissac, in his Notes.*

AT the time of which M. Foissac speaks, things went far better with the magnetisers than they now do; they were then well off, *pecuniarily* speaking, while now it is *academically* only that they can be said to thrive. The times are bad—deplorably bad—for the magnetisers. It would be quite useless for M. Foissac to expect at present such patrons as the Bergasses and Kornmanns—people whose zeal and generosity, as he justly observes, we cannot too much admire. We would venture to say, that he could not at this moment find ten persons—nay, not *one*—willing to sacrifice 2400 francs to secure his glory and independence. It has, notwithstanding, been sought to resuscitate animal magnetism from its ashes; but instead of finding a minister of state like M. Maurepas, who offered Mesmer a life annuity of 20,000 fr., and a gift of 10,000, on condition of his communicating his doctrines to disciples in France, M. Foissac has met only with men of hard principles and cold hearts. However, though he has not been successful in getting men of the world to loose

their purse-strings for him, he has not knocked at the door of the Academy of Medicine altogether in vain. Though an ungrateful world will not make up for him the small sum of 340,000 fr., the Academy has not turned a deaf ear to his applications; it has bestowed upon him—not 340,000 fr. it is true, but—its attention, —also some discussions, and a report very well drawn upon, but rather illegitimate—at least never acknowledged or adopted by its parent.

Of these discussions and this report M. Foissac has taken possession: he would probably have preferred the 340,000 fr. but it was as well, perhaps, that he took what he could get; and the public, we fancy, has been a gainer by it: for once M. F. should have *touched* (to use his own expression) the said 340,000 fr. his glory and independence would, no doubt, have been secured, but we should have been nothing the better for it; whereas now that the Academy has generously lent him its attention, its discussions and report, M. Foissac is unwilling to keep these treasures all to himself: he has carefully gathered and kindly laid them before the public. Any one may now possess himself of them for the small sum of seven or eight francs; and, thanks to the great liberality of M. F., all young physicians may now be initiated in the beneficent practice of magnetism: "let them only," says the author of the *Notes*, "hold *somnambulism* sacred; let them not treat with unbecoming levity this inestimable boon of the Deity!"

But truth to say, M. Foissac has had no small trouble in getting from the Academy even its attention, its discussions, and the report, such as it is. We shall take a short review of the difficulties and obstacles he had to surmount, for it is not a bad story—a drama, the plot of which is not destitute of interest.

In the year 1825, during the repose of the restoration, M. Foissac, tired of performing miracles for a public that was insensible of their value, thought it would be more conducive to the interests of science, of humanity, and of himself, if he were to address some of higher authorities. He accordingly had the question proposed to the Academy of Medicine, whether it was not consistent with the engagements of that learned body to recommence their inquiries into animal magnetism? M. Marc was one of the first to consider it necessary to take up the subject. M. Renauldin opposed the opinion of M. Marc. "We ought not," said this gentleman, "to waste our time on *absurdities*; animal magnetism has been long dead and buried, and it is surely not for the Academy to dig it up again." M. Double, however, proposed a commission to consider the expediency of discussing magnetism in the Academy; and this commission advised that another should be appointed to investigate and to decide upon animal magnetism. But the advice was by no means generally acceptable to the members of the Academy: M. Desgenettes, for example, appealed to the opinion of Thouret, that magnetism, on the whole, is nothing more than a humbug (*une jonglerie*). This distinguished member thought it singular that it should be inculcated on young men entering the profession, that reading was useless, research vain; and he saw with regret that it would soon only remain to stop the courses in the schools, and to shut up those buildings previous to their demolition. M. Bally was so unkind as to think that the commissioners might possibly be taken in by the magnetic juggleries, or that their credulity might lead them captive. M. Double complained that the report was, from first to last, nothing but an apology for magnestism. He could not, he said, suppose that the reporters, in 1784, performed their task bigotedly, or carelessly: the names of Lavoisier, Bailly, and Franklin, forbade him to harbour such a thought. The magnetism of to-day, he added, differed in no respect from that which was seriously examined in 1784; in saying which, by the way, M. Double seems most unaccountably to have made no allowance for the graceful *passes* of M. Foissac, compared with the homely pressures of Mesmer on the bellies of our grandmothers from the ribs to the pubes. But it is clear enough that the *effects* of magnetism have not been the same at the two epochs. Did not Mesmer get his 340,000 fr. while his modern imitator has only had the discussions and the report of the Academy for his pains? M. Double went farther. He did not hesitate to say, that from the time of Mesmer till now, every thing related about the singular effects of magnetism was nothing better than a delusion, and that all who were concerned in them might

be classed in a two-fold division of *knaves* and *fools*. Nor was this all. M. Double protested that the appointment of a commission could only be injurious to the progress of science and to the reputation of the Academy. "Why may we not apprehend," said he, with a spirit of prophecy, "that the commissioners themselves shall be deceived?—and why may we not suppose that bodies of men are as open to mystification as individuals?"

Laennec also voted against appointing a commission: he had given considerable attention, he said, to magnetism for above twenty years, and he was quite satisfied that it consisted of nothing but deception and humbug.

In despite of all this, however, a commission was appointed; and on the 28th February, 1826, the following members were elected commissioners:—MM. Leroux, Bourdois de la Mothe, Double, Magendie, Guersent, Laennec, Thillaye, Mare, Itard, Fouquier, and Gueneau de Mussy. In June, M. Laennec having been obliged to quit Paris through ill health, M. Husson was appointed to take his place.

Behold now the play ready to begin. M. Foissac had nothing to do but to set to work in presence of his dozen commissioners, and to shew that he had nothing in his cuffs—nothing in his pockets. He did all this to the satisfaction of his audience—a little shuffling perhaps excepted, but that did not much signify. M. Magendie, for example, confessed he saw nothing in the cuffs or the pockets of M. Foissac; but he thought that, in order to keep clear of certain strings or wires that might be disposed on the scene of action, it would be preferable to have the experiments performed in his (M. M.'s) house. M. Foissac saw no objection; he was quite content to adjourn the experiments; but it would be necessary to procure the consent of his *somnambule*. He applied to the lady in all the simplicity of his heart; he even, as he said in his letter of the 2d May, made the most pressing and repeated requests of her; but, to his great regret, *she expressed her fixed determination* to submit to no experiments any where else than at his house. M. Foissac was consequently *under the necessity* (these were his words) of urging the commission to favour him with their presence at his house, if they wished to investigate his magnetic experiments. Now this was all clearly M. Magendie's fault. What right had he to suspect strings, or wires, when he could see none?—and how was M. Foissac to blame, since it was the young lady who *would not* come to be magnetised out of a particular locality. The commission were satisfied, and did justice to the magnetiser; but M. Magendie did justice to himself, and attended their meetings no more. M. Double followed his example: and from this time forth the proceedings of the commissioners went upon wheels; for nothing facilitates so much the progress of any business as the getting rid of scrupulous intermeddlers—people who give opposition, and who reason as they proceed.

M. Bourdois de la Mothe wrote to M. Foissac as follows: "My dear sir,—you reiterate your request; you wish the commission to meet only at your house, because your *somnambule* refuses to comply with your solicitations of going to the residence of M. Magendie. The commisioners have no reasonable objection to make to this, and putting aside the usual custom, and perhaps the etiquette, of the Academy, they are satified to hold their meetings where you please."

M. Foissac having now secured his own ground, and got rid of MM. Double and Magendie, prepared afresh for leading the commission in the right way. His course of experimental training lasted six consecutive years; but to be sure the report is so much the more elaborate on that account. M. Foissac first taught the commissioners *how to perform the passes*; and so well did they profit by his instruction, that, at a subsequent period, they were enabled to submit to the Academy the following axiom. The compound of lead and tin (the common solder of the plumbers) cannot be formed without heat; the mixture of equal volumes of chlorine and hydrogen cannot be inflamed without sun-light; *therefore* animal magnetism requires the union of certain conditions, of certain organic mixtures, resulting from the action of the *passes*.

Having instructed them so far, M. Foissac next gave them this important piece of information—namely, that some persons resist the power of magnetism altogether, while in others it produces only *slight and very transient effects: and then he made them acquainted with the first elements of magnetic action.*

The commissioners confess, that in the course of these inquiries, if they had not been gifted with much sagacity and power of applying their minds, they would have been sometimes carried away by their imaginations.

The experiments now began to be decisive. M. Foissac exhibited a child twenty-eight months old, which was so affected by the *passes* that it rubbed its eyes, yawned, scratched its head and ears, grew restless, and at last had a *besoin d'uriner*. The commissioners were greatly struck with this curious case. Emboldened with his success, M. Foissac proceeded to unfold the mysteries of somnambulism; and it was truly wonderful to observe the rapid progress of the neophytes in the magnetic sciences: they were soon perfect adepts in those admirable faculties of *intuition*, *clairvoyance*, and *second-sight*.

Six years thus rolled by, and it was not till after the completion of that period that M. Husson was enabled to read his report to the Academy, and to make a present of it to M. Foissac, with as much zeal as M. Bergasse formerly displayed when he sent M. Mesmer the 340,000 fr.

The report was read at two full meetings of the Academy on the 21st and 28th of June, 1833; and it was proposed, in order that the discussion upon it should be the more exact and to the point, that the document of the commissioners should be written out by each, in his own hand, and that exactly so many copies should be printed as there were members of the Academy. But days, weeks, months, and years, have gone by without any symptom of the discussion being broached. Not a word (as if by general consent), ever drops in the Academy having the remotest reference to animal magnetism: so that M. Foissac has had to content himself with the report read, but not adopted—listened to, but not approved. The eminent magnetizer, however, does not care for this: he says, in one of his notes, *that the report ought not the less to be considered as the general verdict of the Academy of Medicine* —an opinion which ought to give him much consolation.

But M. Foissac has too much good sense not to know that the work of a commission is not the verdict of a general assembly; and moreover, that in the present case the Academy by no means forgets the report, which, in fact, it knows perfectly well has never yet been discussed within its walls—while, out of the Academy, the said report has only been examined by a single individual *, the author of this article.

DUBOIS (d'Amiens †.)

A Demonstration of the Nerves of the Human Body. By JOSEPH SWAN. Part IV., *the Spinal Nerves.*

THIS, the fourth and last part of this splendid work, fully maintains the high character of those which have preceded it. The spinal nerves are here traced with the same laborious care, and delineated with the same power, which have marked the whole. The only remark which has occurred to us in the way of criticism, is, that we should have thought some of the nerves of the extremities too large, and that, in the effort to make them distinct, they had been somewhat exaggerated. On the whole it may be regarded as a national work; and the chief source of regret is, that the price is necessarily so high, as to place it beyond the reach of the great majority of persons. Would it not be a good plan for the College of Surgeons to purchase the plates, and furnish impressions to members at a very reduced price? This would be a popular and useful mode of applying some of their surplus funds.

A Series of Anatomical Plates, in Lithography; with References and Physiological Comments, illustrating the Structure of the different parts of the Human Body. Edited by JONES QUAIN, M.D., Professor of Anatomy in the University of London. Taylor, Upper Gower-street.

THIS work, three fasciculi of which lie before us, is highly creditable to Dr. Quain. It is to consist of a series of anatomical plates, copied from various works, which their high price or other

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* M. Dubois refers to his *Examen historique et raisonné des experiences pretendues magnetiques faites par la Commission de l'Acad. Roy. de Médecine.*

† From the *Journal Hebdomadaire.* We are not in the habit of borrowing critical notices from our contemporaries; but our readers, we think, will agree with us, that a departure from our usual practice is fully excusable in favour of so excellent a critique as the above.—ED. GAZ.

circumstances place beyond the reach of most persons. The drawings, which are of large size, are executed on stone, and are accompanied by references and a running comment. Both departments appear to us to be well executed; and the price is moderate, being only two shillings each fasciculus, containing two plates and four pages of text. Our artists in this country have difficulty in competing with their foreign neighbours, owing to the much greater expense in bringing their works before the public. We trust, therefore, that the present, and some other undertakings of a somewhat similar kind, which are now in progress, will meet with the encouragement they so well deserve.

MEDICAL GAZETTE.

Saturday, January 25, 1834.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

PRANKS OF CERTAIN RADICAL ORATORS.

IT has been well observed, that a project has few more serious obstacles to encounter than the injudicious advocacy of pretended or professing friends:—its movements are clogged, its progress is impeded, by the superabundant zeal of the unskilful, however well-intentioned, patrons, that are about it; and nothing is better calculated to encourage its opponents—for every new project will have its opponents—than to see the officious and encumbering support of those who undertake to drive it, at all hazards, over every difficulty.

If ever question was exposed to the risk of being rendered abortive from similar interferences, it is that of medical reform; for we find it taken up as a text, and preached upon by the hour by every babbler who can contrive to get together an audience to listen to him. The question is one of vital—of paramount interest, at the present moment, to the whole medical profession;—one on which every medical man is bound to take some side or other;—none but the absolutely indifferent can remain neutral. But we cannot for one moment admit that every practitioner, of whatever standing, is competent to grapple with the difficulties of reform—much less is qualified to set himself up as a leader, if he only have the hardihood to "rush in" where wiser men "fear to tread." We regret to see that many such have recently stumbled on the question of reform—persons who, with a most slender stock of acquirements, and none of the wisdom which experience gives, obtrude themselves on audiences, by the mere dint of clamorousness and the vehemence of the abuse which they pour on existing institutions. Advocates, without discretion, for changes, the consequences of which they cannot foresee, they plunge at every step into absurdities, and expend their ill-judged endeavours in rendering reform an object of ridicule and contempt.

We have had frequent occasion to notice how the same sort of proceeding has been managed in town: we are sorry to see that the example has spread, though very partially, to the provinces, and that in certain meetings got up either directly or indirectly to discuss the subject of reform, generally the least experienced members, and those least entitled to a hearing, either from rank or talent, have contrived to be most obtrusive with their ultra and extravagant speech-making.

Were it not that this practice has been on the increase, and that the gentry to whom we allude echo each other, and contrive to give an appearance of strength to their assertions by the frequency of their repetition, we should think it needless to waste our words in exposing their shallowness and sophis-

try. But it may not be amiss briefly to shew the sort of stuff that is brought forward by way of advocating the "good cause" of what *they* call reform, but which all the world, except themselves perhaps, must perceive to be, in their hands, nothing more than the "levelling downwards" of our ancient ally and present opponent.

In the course of last week we received a provincial paper, containing a couple of columns of close print, under the head of Medical Reform. This copious report consisted chiefly of one speech—most likely that of the gentleman who favoured us with the newspaper in which it was inserted; at all events we shall give him credit for it, and in return for his civility we shall treat him with the courtesy of suppressing his name, while we notice a few points that struck us in his oration; though indeed there is nothing in it to entitle it to be considered as his peculiar property, for all the assertions it contains have been already made in other places: they are *communis juris* among our precocious reformers.

It would be well on all occasions where those advocates for levelling—whether upwards or downwards—claim the attention of their professional brethren, that they should be called upon, in the first instance, to explain the nature of their plans. We have seen how miserably contemptible—how utterly stupid—the one Faculty scheme of certain speculators in the metropolis turned out to be, when examined by the touchstone of common sense. That project will not soon be brought forward again, we fancy, though something equally absurd may be got up under another name. We find that some airy dreamers in the provinces are still inclined for "one national establishment," which shall have the virtue of "securing to the public professional competency, to *ourselves* professional honours, *gentlemanly conduct*, *equal rights*, and *equal rank*." A necessary part of this scheme is, that all existing medical institutions shall be destroyed, as possessing, among other vices, that of upholding grades and distinctions—the latter, by conferring of titles—"which are only a kind of nicknames." It will generally, we believe, be found that persons who talk in this manner have no respectable "nickname" of their own, or perhaps any pretensions to one.

This, however, by the way. The same ingenious reformer proceeds—"It only remains for parliament to assimilate those institutions (the present medical corporate bodies) to the nature of our science by making them 'one and indivisible.'" Now hear his exquisite reason. "However applicable and beneficial the corporative system might be to the purposes of civil government, it was not so to medical science. He (the speaker) admired the *pure principle of municipal corporation* in *civil* cases; but the laws of medical science are founded on truth, facts, experiments, and reason: they are *universal* and *republican*. They respect no person—acknowledge no partial feelings—no distinctions except the noble one of intellect—no districts—no country. Pure philosophy is no partisan—no corporator." Nor, we may add, is the pure philosopher a babbling blockhead. Was ever such trash uttered and gravely listened to? or was such nonsense really poured forth in a respectable assembly? So blindly do the set of talking innovators (of whom we may consider the one before us as the representative) follow one another like sheep, in a strain like the preceding, that they themselves fancy there is something in it, and are heard out from a habit of patient or indolent endurance on the part of their audiences.

"The laws of medical science are universal and *republican*." "Medicine is,

what the *French republic* was said to be, 'one and indivisible.'" We copy these delectable phrases from the speech of an individual professing to advocate medical reform. Now supposing there were the slightest likelihood in these propositions, that medicine is republican, and "what the French republic was *said* to be," how can we sufficiently admire the logic of the reasoner, who would thence infer that there should be no grades, no distinctions, among medical practitioners? In the confused heads of these self-satisfied directors of the legislature, there is no difference between the principles of medical science and the conventional laws, or external arrangements, whereby the science is rendered practical, useful, and available in society. They argue, or they repeat the meaningless phrases, that because medical science is "one and indivisible," therefore there should be a "one and indivisible" Faculty (after the fashion of the French revolutionary republic), to regulate the affairs of medicine, abolishing all grades, distinctions, and "nicknames," among practitioners. Admirable logicians! they forget to state whether the "one and indivisible" republic of France was itself able to carry its political theory of reform to such an extent in practice.

We have heard, indeed, from more than one quarter, of late, among the levellers, this sort of doctrine broached—that medicine should constitute a republic, as literature does; that as there is a republic of letters, so should there be a republic of medicine. It strikes us, with due deference to the learned persons we have to deal with, that the meaning of a republic of letters is not well understood by them. Do they mean by it, that in what is called the literary republic there are no grades nor distinctions, but that all members of it enjoy "equal rank—equal rights?"—that there are no practical distinctions in literature?—that there are not higher and lower departments in literature?—no difference in the stations of a Byron and a ballad-maker?

But they will tell us, perhaps, that they mean there is no prescriptive right in letters; that every man may cultivate whatever department of literature he pleases. What, then! is it because a man may indite an epic or an epigram, as likes him best, without any restriction, that therefore whoever chooses should be permitted to meddle in matters of life and death—to deal with his Majesty's lieges, and treat disease, perform operations, dispense medicines, &c. just as it pleases him—there being, or since there ought to be, a republic of medicine free as the republic of letters? To what absurdities shall we not be exposed at last? Medical knowledge is "one and indivisible;" *therefore* there should be no grades or distinctions in the profession! Why, if this be the case—if such inference be warranted—then, *à fortiori*, we may argue that *knowledge itself is one and indivisible*; and *therefore* there ought to be no professions—no narrow bigotted and antiquated distinctions between practitioners of law and practitioners of physic. In the republic of *knowledge* there should be no grades; every man should be competent to practise as a divine, a lawyer, or a physician, according to his own good will and pleasure *nem. con.* This, preposterous as it may seem, is only the natural application of our ultra-reformer's doctrine. Let us suppose for one moment the same sort of argument applied to legal arrangements. Law is, undoubtedly, as good a subject for a republic as medicine; for there is not one law for the rich and another for the poor, no more than there are different kinds of medicine to suit different classes: but we should like to know how law could be rendered practical without distinct and well-defined grades among its practitioners? Re-

ligion, too?—But we will not trespass on the reader's patience.

Our reforming orators clearly go upon this gratuitous assumption,—that as medicine is one science in *theory*, so it should be in *practice*—and that each medical practitioner should be independent of a division of labour; be in himself all in all. There cannot be a doubt but that the practitioner must and ought to be so, where the people can have no choice in selecting their medical advisers—as in remote country parts, or where the population is too scanty and too poor to tempt a number of professional men to settle; but in large towns, where medical practitioners are numerous, distinctions will of themselves be made, and no man will be deemed equally competent in every department of medical practice. It is most inconclusive and silly reasoning to maintain, as we frequently find it done, that because the limits that should distinguish surgical from medical practice cannot be exactly defined, that therefore there should be *no* limits, *no* boundaries, *no* restrictions at all. One actual fact is worth a bushel of arguments. The distinctions *are* made, and will be made, by the patients themselves, however the new-fangled Faculties may dispose of them. Wherever the members of the profession are numerous, the degrees of reputation will be various, and they will be settled by the public award: the ability of each will be tested, and his particular merit ascertained. It is not the man who sets himself forth as all-accomplished that will have the best chance of success, but he who is known to have devoted the greatest share of his attention to some particular *department* of the healing art. And this distinction will be more and more attended to, the more the progress of knowledge and enlightenment is extended in the community. The levellers, we know, in their own way of calculating, reckon on the halcyon days when the "republic of medicine" will allow each man to play in his time many parts. We confess we are not so astute as to perceive the wisdom of their anticipations; for to our mind, society is not retrogressive, "not levelling downwards," but proceeding with steady steps just the other way; and until we can observe the current of civilization taking a turn, and setting in towards primitive barbarism—when, as it was in earlier times, every medical man was expected to be a practitioner of all work, including cattle practice, &c.—until then, we say, we shall advocate the division of labour and the maintenance of distinctions, which we see are not only called for by the community itself, but essentially requisite for the improvement of the medical art.

But we have rather exceeded the limits we intended. The chief object we had in view, in penning these remarks, was to draw attention to the extravagancies of the "radical libellers," (as a contemporary used to call them) who, taking advantage of the crisis, hope to mend their individual fortunes by embarking in the cause of medical reform, but who, by their meddling and unwise, as well as unasked-for interference, are likely to do much mischief, unless they be promptly checked in their career. If the observations we have offered be in any degree instrumental in effecting this purpose, we shall feel conscious of having, in one more particular, discharged our duty as rational and useful reformers.

MORE ALLEGED *OVERTURES!* TO WAKLEY.

Our *respected* contemporary, the Editor of the Lancet, has sadly lost his temper, despite of Dr. Johnson's testimony to its excellence. We are not much surprised at this; for what with the imprudent avowals of his Medico-Chirurgical ally, and the use which we have made

of them to expose both, he certainly has had a good deal to fret him. This may account for his attempts at retaliation being somewhat less skilful than usual: there is too much of passion, and too little of probability in them. He has written a long, and—so far as hard words go—a strong article, to prove what he has tried to make out fifty times before—namely, that Dr. Macleod is editor of this journal, and consequently is his tormentor; in support of which idea he makes a variety of statements which we know to be false, while others are perverted to make them bear on a *foregone* conclusion. However, on this subject we say—as we have repeatedly said already—that if any gentleman thinks it discreditable to him to be supposed the editor of the Medical Gazette, our pages are open to his contradiction; but it is not for us to volunteer it, seeing we do not, and cannot, regard such an imputation as reflecting injuriously on the character of any one. In the present instance, however, there is one charge in which *we* are indirectly implicated; namely, that Dr. Macleod, *quasi* editor of this journal, made a communication to Mr. Wakley, desiring to be included in the peace which resulted from the Medico-Chirurgical Review striking its colours to the Lancet.

We presume that the subjoined letters from Dr. Macleod and Mr. Tucker will set this fiction at rest. It can scarcely be necessary for us to add our contradiction to theirs; but as there are people in the world who may suppose that Wakley was only mistaken in as far as regards the individual from whom the alleged proposals came, and that although Dr. Macleod did not, the Editor of this journal might nevertheless have made them, we think it right to state, in express terms, that, so far as we are concerned, there is not a vestige of truth in the whole story; and we think that an appeal to the pages of the Gazette will be quite sufficient to convince any person of common sense, that to conciliate the Lancet must have been about the last object we ever have had in view.

The fabrication, indeed, is in several respects a very stupid one: it is badly timed, just after our demonstration of the circumstances under which the understanding between our opponents took place;—it was inconsiderate too not to have ascertained beforehand what terms the person said to have been employed to conduct the negotiation was on with the other party;—neither is it quite consistent with probability to inform us that the proposal "was *not a confidential* one," but actually made by Mr. Tucker in the presence of a third person! A most trustworthy messenger, truly, and most careful of the interests of his principal!

There is one point, however, which is very creditable to Mr. Wakley's forbearance, if true, and another which is not less illustrative of his candour, whether the allegation be true or false. The first consists in his having locked up the transaction in his own bosom from the year 1830 till 1834; and while meantime he lost no opportunity of attacking Dr. Macleod, yet made no use of a circumstance which was calculated, if true, to place the object of his hatred in a more unfavourable light than any thing with which even his fertile and practised ingenuity had hitherto supplied him. When we further consider that his delicate sense of honour was under no restraint, the communication not having been "confidential," and that the trouble could not have been small which it must have given him to invent the thousand falsehoods which meantime appeared in the Lancet, his magnanimity in the concealment becomes entitled to our warmest admiration. Nor, as we have hinted, is his ingenuousness less apparent in the view which he

takes of this affair. He is desirous of covering Dr. Macleod with confusion;—of placing him in the most contemptible position which his imagination can suggest;—in short, of bringing every disgraceful accusation to a climax;—and this crowning infamy which he justly assumes will overtop the whole, consists in charging Dr. Macleod with having stooped to hold communication with himself!!! In this we agree entirely with the Editor of the Lancet: it shews that he rightly estimates his own position in society, as well as that of his opponent; and we must do him the justice to say that there is both discernment and candour in his admission.

LETTER FROM DR. MACLEOD.

To the Editor of the Medical Gazette.

Sir,

In the last number of the Lancet, is contained one of those tirades against me with which the readers of that journal have been so frequently edified: the only point, however, which requires remark, is the assertion that I had made a communication to the Editor of the Lancet with a view of deprecating his wrath! Fortunately, as often happens in matters of this kind, the collateral circumstances, which are intended to render the fiction more probable, afford me the means of rebutting it. The occurrence is said to have taken place in the autumn of 1830, when an effort was made to raise a sum of money for the family of the late Dr. Nuttall. "While the subscription was in progress, (says Mr. Wakley,) Mr. Tucker frequently came in contact with Macleod, and after one of the interviews between this 'moral' man and Mr. Tucker, Mr. T. called at the residence of the Editor of the Lancet"; when he is stated to have made the communication alluded to, in accordance with my "wish." Now, sir, unluckily for the accuracy of these details, it happens that (for reasons unnecessary to mention here) I disapproved of the said subscription, and took no concern in it until a much later period, when I consented, at the request of the family, to become a trustee for the money, jointly with Dr. H. Ley and Mr. Robertson of Berners-Street. I have of late met Mr. Tucker several times professionally, but so far from the business of the subscription bringing me into contact with him at the period alluded to "frequently," it never did so at all except once; when he called on me, as I presume he did on many others, to ask me to contribute.

With respect to the allegation itself, I have only to say that I never made, nor contemplated making, any communication to Mr. Wakley, directly or indirectly;—that I never authorized, nor connived at, any one doing so;—and that if, in the instance to which he refers, or on any other occasion, the Editor of the Lancet was led to imagine the contrary, he has been imposed upon. Indeed, the only occasion on which I have any recollection of Mr. Wakley's name having been even mentioned, was one day when I accidentally met Mr. Tucker canvassing for him at the time he was a candidate for the coronership. I asked him—"Well, how does your friend Wakley get on?" to which he replied, "Oh, very well: indeed, I do not think Wakley is a bad fellow: I think *you* are too hard upon him." To this I rejoined, "Why lay an emphasis on YOU?—you do not imagine, surely, that *I* write all the attacks upon him which you see in the Medical Gazette?"—And so we parted.

I am, sir,
Your obedient servant,
R. Macleod.

23, Henrietta-Street,
Jan. 20, 1834.

MR. TUCKER'S CONTRADICTION.

To the Editor of the Medical Gazette.

Jan. 18, 1834.

Sir,

It is stated in the Lancet of this day that I had been the bearer of a communication from Dr. Macleod to Mr. Wakley, conveying a wish on his part that all hostilities should cease between them. There is some great mistake in this: Dr. Macleod never expressed any desire of the kind to me, nor autho-

RIZED ME TO MAKE THAT OR ANY OTHER COMMUNICATION TO MR. WAKLEY.

I am, sir,
Your obedient servant,
J. H. TUCKER.

17, Howland-Street.

[As this sheet was passing the press, we received the Lancet of January 25th, which contains a copy of the preceding, and also a second letter from Mr. Tucker, fully bearing out all that has been said above. He says to the Editor of the Lancet, in his *second* letter, "You assert, *I contradict*, Dr. Macleod is supposed to have deputed me to carry a message to you;" and yet, in the face of this reiteration by Mr. Tucker of his previous statement (which, if not perfectly elegant as to language, is at least unequivocal as to meaning), Wakley has the impudence to assert that it proves the truth of his allegation! This is exactly like a headstrong mule, which, being lashed for kicking, only kicks the more.—ED. GAZ.]

DR. GREGORY'S DEFENCE.

To the Editor of the Medical Gazette.

SIR,

THE conciliatory tone of your remarks on my letter in your last number, induces me no longer to withhold that explanation which circumstances prevented my offering to the Westminster Medical Society, and which your employment of the terms *bullying* and *browbeating* precluded me on a previous occasion from offering to yourself. I am the more inclined to do so, as you see no impropriety in making public the transactions of a private meeting.

At that party I brought forward a series of resolutions, which I should have been glad to see adopted as the basis of the proceedings of the Westminster Medical Society, touching medical reform. One of them was couched in these terms:—

"7. That to promote the union of the different branches of the profession practising throughout this country, it is highly desirable that a Central Council, or Commission, acting under the presidency of his Majesty's Secretary of State for the Home Department, should be appointed by authority of Parliament, to have cognizance of all matters touching the practice and education of medical men in this country, and that such Council be invested by Parliament with adequate powers for that purpose."

When Dr. Somerville's resolution (now called No. 8), was afterwards read, and commented upon, it appeared to me that the Faculty, or Academy, therein mentioned, approached as nearly to the Central Council, or Commission, proposed by myself, as could be reasonably expected; and under this impression I made no objection to the resolution, more especially as it provided that such Faculty or Academy should be at all times "*under the direction of the legislature*," implying thereby, that such Faculty or Academy should not be purely *professional*, but should be assisted in its deliberations by the advice of some of those who compose the *legislature*.

Let me recal to your recollection the wording of Dr. Somerville's celebrated eighth resolution, as you will find it recorded in page 336 of your current volume.

"8. That in the opinion of this Society the evils now complained of will be remedied most effectually by the constitution of one Faculty or Academy of Medicine, which, UNDER THE DIRECTION OF THE LEGISLATURE, shall preside over and regulate the education and practice of the medical profession THROUGHOUT THE UNITED KINGDOM."

The wording of this resolution sufficiently proves, that the body (call it faculty, council, academy, or commission) here contemplated, was to have control over Scotland, Ireland, England, and Wales; that it was to take cognizance of abuses in the University of St. Andrew's, and of the King's and Queen's College of Physicians in Ireland; that it was to act in conformity to the instructions of the legislature—in short, that it was to be a Faculty or body, entrusted with the salutary power of *controlling* the several medical incorporations now existing, as well as the various universities in the three kingdoms, in so far as relates to the faculty of medicine.

It seems to me to bid defiance to the

ingenuity of man to put any other construction upon the terms employed in this celebrated composition. I assure you, sir, I had not the honour of *penning* it. The whole merit of the terms "Faculty or Academy" belongs to others. I plead guilty to the device of having introduced into the resolution the clauses which I have distinguished by capitals.

During the whole of that evening not one word (that I heard) was ever uttered about *amalgamation* of the several grades in medicine, or the abolition of existing incorporations, or of a Scotch, English, and Irish, Collegium or Faculty. I left the room under the firm belief and persuasion, that the Faculty or Academy of Dr. James Somerville was *plus* the existing incorporations—something superadded to them, to infuse harmony and uniformity (as far as possible) into their several proceedings, for the good of the profession.

The comments, however, made upon this 8th resolution, both in the Westminster Medical Society and out of it, convinced me, that what I thought beyond the ingenuity of man was actually done. The 8th resolution was *tortured*, so as to signify something which you designated in your number for December 7, as "preposterous in theory"—as "too ludicrous for serious refutation"—as "absolutely futile"—as "pregnant with discord," &c. &c. &c.

On the very same evening, *therefore*, on which I read these your commentaries on Dr. Somerville's 8th resolution, I determined to prevent the possibility of *future* cavilling, by moving the following amendment to the aforesaid resolution. This you will at once perceive to have been only so far modified from the terms of my original resolution (submitted at Dr. James Somerville's tea party), as was necessary to avoid the kind of ambiguity of which you *yourself* complained in page 375, line 7.

Amendment to resolution No. 8.

"That in the opinion of this Society the evils now complained of will be remedied most effectually by the constitution of a *Central Board of Commissioners*, who, under the sanction of the legislature, and the *immediate direction* of the Home Secretary, shall take cognizance of medical education and practice in all its branches, throughout the united kingdom, have jurisdiction *over* the several medical incorporations, and act as a Court of Appeal *from* their decisions."

I proposed this as an *amendment* to Dr. Somerville's resolution; but I do not now, and never did, look upon it as opposed to the *spirit* of that resolution, when considered *per se*, and without reference to the comments by which it has been since overlaid and disfigured. Had that unfortunate word "*Faculty*" been kept out of the resolution, and the words "Council," or "Academy," simply, been substituted, there would have been no misunderstanding.

You are now, sir, in a situation to judge whether or not I am liable to the imputation of having "supported the one Faculty" scheme in the *Committee*, and opposed it in the Society.

It were most unreasonable to expect that the pages of your useful publication should be occupied with matters so little interesting to the public as those contained in this letter; but you will please to observe, that you dragged me into it; I neither courted nor shunned explanation. Whether you publish my defence or not is, however, a matter of complete indifference to me. I write simply for you—that I may stand well in the eyes of one whom I have always respected, and continue highly to respect; for notwithstanding your remark, that "others participate in the same feeling of distrust with yourself," I feel perfectly satisfied that those among my professional brethren whose opinion is most to be valued, require no such explanation from me as that which I have now offered to you.

Permit me, before I conclude, to set you right on a matter of fact. In page 603, you state, "on two previous evenings Dr. Gregory, not being in the chair, had ample opportunities of rebutting the charges of his opponents." The sentence is imperfect; but I presume you mean to insinuate that I had, both on the 14th and 21st December, ample opportunities to rebut the charges of my opponents, *but did not avail myself of them.*

Now for the *fact*:—On the evening of December 14, after the ballot had been taken, Dr. King put the very question to me. I rose to reply; but the Society (well pleased with the result of the *first* ballot) seemed to consider ex-

planation on my part unnecessary, for I could not gain a hearing.—I am, sir,

Your very obedient servant,

GEORGE GREGORY.

31, Weymouth-street, Jan. 18, 1834.

FACULTY DOCTORS AND PRACTISING DRUGGISTS.

To the Editor of the Medical Gazette.

SIR,

IN the leading article of your last week's journal, you made some very judicious observations on the present state of general practitioners. You very properly divided them, as they now exist, into two classes; one which practise privately, and the other which keep open druggists' shops; a distinction long since deserving animadversion, from the consequences to which it leads. The private practitioner is generally a man of good professional acquirement, and of gentlemanly feeling and habits, and is anxious to maintain the respectability of the profession to which he belongs. These qualities are no doubt equally to be found in many who keep open shops, but I do think with you that the latter deserve only to be ranked with tradesmen, and ought to be called, as you have suggested, "Practising Druggists," who thus degrade themselves, and a learned profession, by so doing. The private general practitioner is, as you state, the great sufferer; the professional competition betwixt himself and the person who keeps a shop, being by this circumstance placed upon such unequal grounds. The private practitioner is just in the same situation as the young physician, with similar difficulties to surmount; there is little difference. I am glad to see, sir, that you appreciate properly the situation of the private practitioner. Wakley, with all his pretension in supporting the rights of our class, never had the courage to denounce, in terms of censure, the impropriety and injustice of those who keep open shops. Can any thing be more disgraceful than to see the showy lamps and bottles which meet you at every turn, which display a window underneath filled with quack medicines. There is nothing whatever can be urged in extenuation of such practices: if there are difficulties, which all know there are to encounter at the commencement, let them struggle manfully, like the private practitioner and young physician, and then the race would be more equal, and even easier, for all. However, I am glad to state, for the honour of the general practitioner, that this shop-keeping is principally confined to London; nevertheless, it ought to be repressed; for in the country the great body of practitioners exercise their profession in a strictly private manner; and from this class often spring the physicians in large towns—such as Manchester, Leeds, Liverpool, &c. Having acquired property and some local celebrity, after long practice among the gentry and great families in the neighbourhood in which they reside, they repair to Edinburgh, or some other northern University, and, after a short term, graduate. I could mention the names of several who have done so, with credit to themselves and advantage to the circle of their professional connexion and influence.—I am, sir,

Your obedient servant,

A GENERAL PRACTITIONER.

Jan. 21, 1834.

MEDICO-CHIRURGICAL SOCIETY,

Tuesday, Jan. 14.

A CASE was read, from the pen of Mr. HOWSHIP, entitled, *A very unusual Tumor in the Abdomen, in connexion with Hæmorrhage from the Bladder.*

The patient, an aged man, had the symptoms indicating affection of the prostate; yet, on examination by the rectum, the impression was rather that of thickening and disease of the coats of the bladder, than of any material enlargement of the prostate itself. He slowly declined, and was at length confined to his bed; soon after which a tumor in the left side of the abdomen came into notice, which continued to increase, until it reached a very considerable size, occasioning pressure and paralysis of the limb below. His constitutional powers lessened as the tumor increased, until he at length sank exhausted.

In the abdomen a large and tense encysted tumor was ascertained to have occupied the principal part of the space: its length, from above downwards, near nine inches; its circumference 28 inches. This extraordinary tumor, attached to the spine, was removed, and injected, before being opened: it proved eventually to be one of the lumbar absorbent glands, several of which were advancing to a similar con-

dition of disease. The cysts were filled with a grumous and purulent matter.

The liver exhibited fungoid tumors; some large, others small. The pelvis contained very extensive disease, of the same kind with the rest; the coats of the bladder forming a highly vascular and hæmorrhagic cushion projecting forward into its cavity, from which the blood had been effused during life.

The specimens illustrating the case, and placed on the table, from Mr. Howship's collection, consisted of three preparations. The large abdominal tumor, the cavities of which were seen through vascular openings; the diseased bladder and pelvic viscera; and a section of the liver, to shew the structure of the disease:—all beautifully injected, and very demonstrative of the peculiar and minute appearances of the disease.

The paper having been read, some conversation arose on the source and correct locality of the matter of medullary tumors, and of scrofulous deposits.

The president (Dr. Elliotson) quoted the opinion of Dr. Carswell, that scrofulous matter may be primarily deposited on any surface, mucous, serous, or otherwise; and he mentioned a case in which a young lady of scrofulous habit, after suffering much from a moveable tumor, apparently of the stomach, which used to rise with a suffocating sensation into the throat, at length ejected it by vomiting: the tumor was a round scrofulous mass. Another tumor of the same sort, and under similar circumstances, was subsequently vomited by the same lady. Dr. E. saw neither, but received this account of them from the medical attendant.

Mr. Lloyd thought that this was a case in which probably the scrofulous tumor had formed between the trachea and œsophagus, into the latter of which it made its way by ulceration. He was opposed to Dr. Carswell's opinions about scrofulous deposits, and maintained that in every case they were first formed in the cellular tissue.

Mr. Langstaff was also opposed to Dr. C.'s views, and contended that all such deposits originated with the vessels. In cases of tubercular deposition in the lungs, none of the adventitious matter either originated or existed in the air-cells; those cells might indeed be obliterated by the encroachments of the tubercles. He had preparations to prove the correctness of his opinions.

A paper, by Mr. James, of Exeter, was then read, giving an *Account of Two Cases of Injury of the Spine, supposed to be Fracture of the Bodies of the Vertebræ.*

This paper was presented by Mr. Stanley. The author began by referring to Mr. Barlow's paper, in the 17th volume of the Society's Transactions, in which there is an account of a case of decided fracture of the vertebral column, proved by the *post-mortem* appearances: the patient, however, lived for several months, though the method of extension was employed in the case. Mr. James's two cases were treated after the same manner, and both recovered. 1. A man aged 40, a mason by trade, fell from a scaffolding the height of forty feet; but the fall was broken at the height of twenty feet by a joist against which he struck: he was thence thrown into a cellar, with his back against the edge of a large block of stone. There was a curvature produced from the seventh to the twelfth dorsal vertebra. There were tumefaction, pain, and tenderness, on pressure; but no paralysis of the limbs. Powerful extension was employed, which removed the curvature and relieved the pain. A splint was applied along the whole of the spine, and secured there by rib bandages; and constant extension was kept up by an ingenious method which the author described. No accident occurred; and the man might be said to have perfectly recovered, except that some degree of stiffness remained in the back. 2. A stout man, a thatcher, aged 33, fell from the roof of a house about twenty feet high. He pitched on his feet and then fell back. There was a bulge of the spine at the junction of the dorsal and lumbar vertebræ. Acute pain was felt darting through to the scrobiculus cordis. The patient could not stand: he felt considerable numbness in his limbs, but he could move them. Much ecchymosis was found about the injured part. Extension was applied as in the last case, and with an equally beneficial result. In the course of a few months the man was able to resume his business. The author concluded with some interesting observations on the possibility of fractures of this sort occurring without paralysis being necessarily produced; and also on the propriety of freely employing the method of extension in the treatment.

Mr. Lloyd was strongly inclined to doubt whether the injuries had been as great as was supposed in these cases. In the first case there were five of the vertebræ said to be more or less injured; and projection of some of the spinous processes was mentioned, although, from the nature of the fall, indentation should rather have been expected. In neither case was there any symptom of injury of the spinal marrow—no paralysis: and he conceived it was by no means certain that fracture had taken place—there was no *postmortem* to prove it; and, besides, from the accident such ecchymosis must have arisen as to

render the diagnosis very obscure. As to the propriety of extension in cases of vertebral fracture, these cases proved nothing.

Mr. Langstaff was favourable to the plan of extension, and quoted Mr. Barlow's case as one in which it decidedly did no harm, if indeed it had not been the means of prolonging the patient's life.

STATUTES
OF THE
UNIVERSITY OF EDINBURGH,
Relative to the Degree of M.D. 1833.

SECT. I. No one shall be admitted to the examinations for the degree of Doctor of Medicine who has not been engaged in medical study for four years, during at least six months of each, either in the University of Edinburgh, or in some other University where the degree of M.D. is given; unless, in addition to three *Anni Medici* in an University, he has attended, during at least six winter months, the medical or surgical practice of a general hospital, which accommodates at least eighty patients, and during the same period a course of practical anatomy; in which case three years of University study will be admitted.

SECT. II. No one shall be admitted to the examinations for the degree of Doctor, who has not given sufficient evidence,—

1. That he has studied, once at least, each of the following departments of medical science, under professors of medicine in this or in some other University, as already defined, viz.

During courses of six months.—Anatomy; chemistry; materia medica and pharmacy; institutes of medicine; practice of medicine; surgery; midwifery, and the diseases peculiar to women and children; general pathology; practical anatomy (unless it has been attended in the year of extra-academical study allowed by Sect. I.)

During courses of six months, or two courses of three months.—Clinical medicine; that is, the treatment of patients in a public hospital, under a professor of medicine, by whom lectures on the cases are given.

During courses of at least three months.—Clinical surgery; medical jurisprudence; botany; natural history, including zoology.

2. That in each year of his academical studies in medicine, he has attended at least two of the six months' courses of lectures above specified, or one of these and two of the three months' courses.

3. That, besides the course of clinical medicine already prescribed, he has attended, for at least six months of another year, the medical or surgical practice of a general hospital, either in Edinburgh or elsewhere, which accommodates not fewer than eighty patients.

4. That he has attended for at least six months, by apprenticeship or otherwise, the art of compounding and dispensing drugs at the laboratory of an hospital, dispensary, member of a Surgical College or Faculty, Licentiate of the London or Dublin Society of Apothecaries, or a professional chemist and druggist.

5. That he has attended for at least six months, by apprenticeship or otherwise, the out-practice of an hospital, or the practice of a dispensary, or that of a physician, surgeon, or member of the London or Dublin Society of Apothecaries.

SECT. III. No one shall obtain the degree of Doctor who has not studied, in the manner already prescribed, for at least one year previous to his graduation, in the University of Edinburgh.

SECT. IV. Every candidate for the degree of medicine must deliver, before the 24th of March, of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine:—

First, A declaration, in his own handwriting, that he is twenty-one years of age, or will be so before the day of graduation; and that he will not be then under articles of apprenticeship to any surgeon or other master.

Secondly, A statement of his studies, as well in literature and philosophy as in medicine, accompanied with proper certificates.

Thirdly, A medical dissertation, composed by himself, in Latin or English; to be perused by a professor, and subject to his approval.

SECT. V. Before a candidate be examined in medicine, the medical faculty shall ascertain, by examination, that he possesses a competent knowledge of the Latin language.

SECT. VI. If the Faculty be satisfied on this point, they shall proceed to examine him, either *viva voce*, or in writing; *first* on anatomy, chemistry, botany, institutes of medicine, and natural history bearing chiefly on zoology; and *secondly*, on materia medica, pathology, practice of medicine, surgery, midwifery, and medical jurisprudence.

SECT. VII. Students who profess themselves ready to submit to an examination on the first division of these subjects, at the end of the third year of their studies, shall be admitted to it at that time.

Sect. VIII. If any one, at these private examinations, be found unqualified for the degree, he must study for another year two of the subjects prescribed in Section II., under professors of medicine, in this or in some other University, as above defined, before he can be admitted to another examination.

Sect. IX. Should he be approved of, he will be allowed, but not required, to print his thesis; and, if printed, forty copies of it must be delivered before the 25th day of July to the Dean of the Medical Faculty.

Sect. X. If the candidate have satisfied the Medical Faculty, the Dean shall lay the proceedings before the Senatus Academicus, by whose authority the candidate shall be summoned, on the 31st of July, to defend his thesis; and, finally, if the Senate think fit, he shall be admitted, on the first lawful day of August, to the degree of Doctor.

Sect. XI. The Senatus Academicus, on the day here appointed, shall assemble at ten o'clock A.M. for the purpose of conferring the degree; and no candidate, unless a sufficient reason be assigned, shall absent himself, on pain of being refused his degree for that year.

Sect. XII. Candidates for graduation shall be required to produce evidence of their having conformed to those regulations which were in force at the time they commenced their medical studies in a University *.

James Syme,
Prof. of Clinical Surgery, Dean of Faculty of Medicine.

W. Hamilton,
Secretary to the Senatus Academicus.

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* Candidates who commenced their University studies before 1825 will be exempted from the fourth year of attendance (Sect. I.), from the additional hospital attendance (Sect. II. art. 3), from the necessity of a year's study in Edinburgh (Sect. III.), and from any attendance on clinical surgery, medical jurisprudence, natural history, military surgery, practical anatomy, pathology, and surgery distinct from anatomy.

Those who commenced between 1825 and 1831, will be exempted from attendance on general pathology, and also on surgery distinct from anatomy.

Those who commenced between 1825 and 1833, will be required to attend only two of the following classes, viz. clinical surgery, medical jurisprudence, natural history, military surgery, practical anatomy.

And those who commenced before 1833, will be exempted from the attendance specified in Sect. II. arts 4 and 5.

N.B. The attendance on midwifery in an University (Sect. II. art 1), is required of all candidates.

MIDDLESEX HOSPITAL.

Cataract of both Eyes—Successful Operation upon one.

Thomas Beadle, æt. 58, a labouring man from Surry, was admitted into the Middlesex Hospital, under Mr. Arnott, Dec. 29th, with two firm and opaque cataracts. He is a stout and healthy man, and gives the following account of his affliction.

Two years ago he began to experience a dimness in the right eye, his sight having been previously good; this imperfection of vision gradually got worse for six months, when he found that he had entirely lost the sight of the eye. Nine months from this time the left began to be dim; this also got worse, and in the course of six months he became perfectly blind. When admitted he was just able to ascertain light from darkness, and could see that there was more than usual light when a candle was placed before his eyes; he then observed that the light was round, and not diffused. Has never been affected with pain in either eye. Irides quite regular in their margin. The extract of belladonna was applied around the lids, and it was ascertained that the cataracts were opaque, of a greyish colour, and firm. Mr. Arnott therefore proposed an operation upon the right eye. This was performed in the operating theatre, Nov. 17.

There was some difficulty attending the operation, in consequence of the eye being seated much deeper than usual; and again, the theatre being lighted from above, the rays of light did not pierce the eye in the most favourable direction; added to which, the patient flinched during the first steps of the operation. The effect of this was, that the incision into the cornea was not sufficiently large to admit the escape of the lens. It was accordingly enlarged by the eye scissars; and the man again drawing his head forcibly away, the iris was slightly lacerated. However, the operation was performed with great neatness and dexterity, and the cataract extracted. The eyelids were then closed, and kept shut by means of sticking plaister. The man was removed into the opthalmic ward, and put to bed, care being taken that he did not stoop, or exert himself whilst he was undressed. The next day it was thought right, as a precautionary measure, to take away ℥xii. of blood. The bowels were freely acted upon; and a slight pain in the head occurring subsequently, was removed by another bleeding.

The rest of the treatment consisted in low diet and occasional purges. The patient gradually improved, and it was

highly satisfactory to find that the operation was attended with perfect success. There was a little irregularity of the iris in one part, but this was only to be detected by a minute examination. With the aid of glasses he could go about nearly as well as before he lost his sight, and could read perfectly clearly.

Mr. Arnott thought it prudent not to operate upon the left eye at present; accordingly the patient left the hospital last week, after undergoing a public exhibition before the clinical class.

Amaurosis of the right eye.

Eliza Harrington, æt. 24, housemaid, a patient also under Mr. Arnott. Loss of vision of the right eye, which she says is enveloped in mist; the pupil is widely dilated, and uninfluenced by a strong light; no discolouration or redness in the eye. The left eye is natural.

Three weeks before admission, which was Nov. 25, she found a dimness come on in the right eye; she was able to see things at a distance from her, while those nearer were less visible. During the day she found that objects appeared dark, while by candle light they were obscured with stars. This alteration in vision terminated, in a fortnight, in complete loss of sight, when pain in the forehead came on. The eye feels hot; face flushed; pulse full; tongue foul.

Is subject to headache, giddiness, dyspepsia, and irregular, sometimes profuse, menstruation.

V.S. ad ℥xiv.; Pulvis Jalapæ Comp. ℈j. stat.

26th.—Febrile symptoms less active; less pain in the head.

Hyd. Submur. gr. ij.; Pulv. Opii, gr. ¼, 6tis horis.

29th.—No alteration.

Rep. Pil. 4tis; Emp. Lyttæ tempori dext.

Dec. 1st.—She feels lighter and more comfortable in the head, but no improvement in vision.

Rep. Pil.

Dec. 14th.—Since the last report she has been cupped, with great relief, and has gone on with the pills. There is less headache, less pain in the eye; sleeps well; no giddiness. Is able just to distinguish letters, and can see objects in the day time, and at night she can see considerably better; there is still however some dullness. The pupil remains dilated, and not affected by a strong light. Gums slightly affected by the mercury.

Rep. pil.; Emp. Lyttæ nuchæ.

20th.—Improvement but slow: thinks she has derived benefit from the blister. The pupil acts slightly, and is less dilated. It appears that the chief cause of imperfection in vision depends upon dilatation of the pupil; for when she looks through a small opening, she sees considerably more distinctly. She can see objects much better at a distance than when close to her. The pills are now omitted, and a blister was applied to the right temple. Upon the blistered surface a quarter of a grain of powdered strychnine was applied; but headache, giddiness, and pain in the eye, being the result, it was discontinued. She continued very gradually to improve, and (Dec. 30th), says she sees considerably better: no pain in the head or eye. Pupil contracts a little more actively by the light of a candle: it is still rather more dilated than the left. She has a blister on the neck at present, and thinks that nothing has done her as much good so the blistering.

The "case of hernia," which was doing well when the report was sent, has continued to improve, the patient being now convalescent.

REMOVAL OF A TROUBLESOME PESSARY.

(From a Correspondent)

Dr. Jewel exhibited to the members of the Westminster Medical Society, on Saturday last, a pessary of an unusual size, which he had extracted from the vagina of a poor woman, a patient of the St. George's and St. James's Dispensary. It appeared that the instrument had been introduced to support a prolapsed uterus, and that it had remained in the vagina without being once removed, for a period of sixteen years and upwards. Extensive ulcerations had long existed, and a most offensive vaginal discharge. There was also great constitutional irritation and emaciation; indeed the poor woman's situation was most deplorable. The pessary was found to be made of hard wood, flattened, and of a rounded form, with a large hole in its centre. It measured eleven inches and three quarters in circumference, and weighed three ounces and a half. The patient, who is a widow, aged 52, is doing well.

HYSTERICAL APHONIA.

Doctor Paschen relates a remarkable and instructive case of aphonia in a young female, of a healthy habit and robust form, who had contracted a violent inflammation of the air-passages, which left behind it a hoarseness; in consequence of which she could not speak, except in a whisper, not audible at more than one or two yards. This state made her shun society, and lasted more than two years, notwithstanding the trial of numerous antiphlogistic, derivative, and antihysterical remedies; and she had abandoned all hopes of cure, when, in mounting a ladder, she slipped, and fell from a height of about fifteen feet on the pavement. She lay senseless for about five minutes, when she gradually came to herself, and looking vacantly around her, asked, in an audible voice, "Where am I?" The presence of a large contused wound on the occiput, shewed that this part of her head had come first to the ground. She was bled, and recovered without a bad symptom, except an erysipelas of the face, and never after lost her voice!

This case proves, in the clearest manner, that an inflammation of the larynx and organs of voice may so affect the nerves of the organs of speech as to produce a nervous aphonia; which may continue long after the original inflammation had ceased.

The effect of the sudden shock, resulting from a fall from a great height, was well exemplified in a case, also related in the Berlin Medical Gazette, in which a man, labouring under a most furious paroxysm of madness in delirium tremens, jumped out of a window four story high upon the pavement. He suffered several compound fractures, and was quite in his senses a few minutes after the accident!—*Hecker's Medical Journ. and Dublin Journal.*

NEW MEDICAL WORKS.

A Treatise on Diseases and Injuries of the Nerves. By J. Swan. A new edition, considerably enlarged, with Ten Plates. 8vo. 14s. bds.

An Examination into the Causes of the Declining Reputation of the Medical Faculty of the University of Edinburgh. 8vo. 1s. 6d. sd.

An Investigation into the Remarkable Medicinal Effects resulting from the external application of Veratria. By A. Turnbull, M.D. 8vo. 4s. bds.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Jan.* 21, 1834.

Abscess	1	Hæmorrhage	1
Age and Debility	46	Heart, diseased	3
Apoplexy	5	Hooping-Cough	8
Asthma	15	Inflammation	33
Cancer	3	Bowels & Stomach	2
Childbirth	3	Brain	4
Consumption	54	Lungs and Pleura	8
Constipation of the Bowels	1	Insanity	1
Convulsions	34	Liver, diseased	5
Croup	2	Measles	11
Dentition or Teething	6	Mortification	2
Diabetes	1	Paralysis	4
Dropsy	17	Small-Pox	2
Dropsy on the Brain	8	Sore Throat and Quinsey	1
Dropsy on the Chest	2	Thrush	2
Erysipelas	3	Tumor	1
Fever	5	Venereal	2
Fever, Scarlet	9		
Fever, Typhus	2	Stillborn	20

Increase of Burials, as compared with the preceding week . . . 39

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Jan. 1834.	Thermometer.		Barometer.	
Thursday . 16	from 39 to 49		29 56 to 29·59	
Friday . . 17	44	51	29·37	29·30
Saturday . 18	41	49	29·40	29 61
Sunday . . 19	39	45	29 63	29 53
Monday . . 20	34	48	29 64	29 92
Tuesday . . 21	45	52	29·82	29 69
Wednesday 22	43	50	29·59	29·69

Wind, S.W.
Generally cloudy, with frequent rain.
Rain fallen, ·65 of an inch.

Charles Henry Adams.

DR. JAMES JOHNSON.

We do not think Dr. J. Johnson a very consistent reformer, certainly; but we never insinuated, nor meant to insinuate, that he had "suborned his son." If he had been capable of such an act, he would probably have "suborned" him to own the authorship of *all* the passages. What we said—for we *insinuated* nothing—was, that it was of no use getting rid by this acknowledgment "of *one* of the many passages we quoted."

NOTICES.

Dr. Collins's very acceptable communication has been received: it shall meet with our earliest attention.

Mr. Battley's paper reached us too late for insertion in the present number.

J. C.—No letter such as that inquired after has come to hand. What was the subject of it?

J. G. D. will find that he has been anticipated by a correspondent with a real signature, to whom we always, *cæteris paribus*, give the preference.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 1, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XVII.

PECULIARITIES OF THE FŒTUS.

There are many peculiarities observed in the fœtal structure, differing materially from the body of the adult: the most prominent and principal of these will be found in the circulating system; for we have already described an organ of essential importance in the economy of the fœtus—the placenta—whose use ceases as soon as breathing life has commenced; and, with the cessation of its office, those vessels close which were dependent on its connexion:—but there are others also highly deserving of notice.

GENERAL PECULIARITIES.

We shall first glance over the general peculiarities, and afterwards consider them in order; commencing at the head, and proceeding downwards. On viewing the fœtal skeleton, we cannot but remark the relative large size of the head and the very small size of the pelvis, both in breadth and depth We perceive, too, that the bones are not firm, but that they are softer than in after-life—that they are imperfectly formed—that the extremities of the long bones are not osseous, but terminate in cartilage or *epiphysis*. We find that the long bones contain no marrow, but, instead of it, a serous fluid. The face of the fœtus is remarkably smaller than the same collection of organs in the adult; it is much rounder, and bears a considerably less proportion to the cranium, properly so called. The upper and lower extremities approach nearly to the same size. On looking at the surface of the body, we must be struck with the highly vascular state of the skin, when compared with that organ in the adult; and we observe, when the child is first born, that the surface is smeared with a white sebaceous matter, which is sometimes in very large quantity, and is generally looked upon as a deposition from the liquor amnii: but I am inclined to follow Hunter and Lobstein in considering it an actual secretion from the glandular follicles of the cutis. This is unctuous to the feel; but on the application of heat, instead of melting, it dries into a brittle flake. It is soluble in a strong solution of soap and water, and also in alcohol. The latter circumstance explains the reason why it is the custom of nurses to add a little spirit to the water in which the child is first washed. The small quantity, however, which they employ, can add but in a trifling degree to the soluble properties of the soap lather; nevertheless, as it has been observed that this sebacious matter comes off most easily if spirits be used, they have continued the practice without being aware either of its origin or intention. It is popularly supposed that this addition prevents the child *taking cold*; but I cannot believe it has any such effect.

In the cellular structure just underneath the cutis, we observe a very considerable deposition of fat, which gives that soft, smooth rotundity to the limbs of the infant, rendering them so elegant and beautiful. This infantile peculiarity gradually wears away as life advances, in consequence of the fat being absorbed from near the surface and deposited in the internal cavities. In the fœtus we find very little fat in the cavities; in the omentum even there is a very small quantity—almost the whole of it is collected underneath the skin. In middle life it is partly deposited

below the skin and partly in the cavities; and in advanced age (especially in the male subject) it is almost all absorbed from beneath the skin, and collected in the cavities and around the internal organs—especially in the omentum and mesentery. It is this that gives to the elderly gentleman the respectable prominence of abdomen.

LOCAL PECULIARITIES.

Skull.—We have already described the bones of the fœtal skull as being separated a considerable distance from each other, by open lines and spaces;—not placed in apposition and junction by serrated edges, as is the case in the adult. We observe also, in cutting through the cranial bones, that there is no diploe, but only one osseous layer. The double table is a process of after-growth.

Jaw.—The lower-jaw is divided into two separate pieces, joined by a suture running perpendicularly downwards, at the tip of the chin. It is of consequence that in practice we should bear in mind this peculiarity; for we shall hereafter see, that in cases of breech presentations, where, from any cause whatever, the head remains at the brim of the pelvis, and does not pass readily into its cavity, one of the best means of changing it from an improper into a more favourable position, and facilitating its descent, is by introducing the first finger of the right or left hand into the mouth, depressing the chin, and making a slight extractive effort, either directly downwards, or to one side or other, as the circumstances of the situation may require. Unless, therefore, we recollect this suture in the centre of the jaw, which is very easily separable, we shall very probably dislocate the two bones at this point, and produce, perhaps, irreparable injury.

Ear.—In the fœtal skull there is no prominence answering to the *meatus auditorius externus*—merely a ring of bone, within which the tympanum is stretched. But we have a very remarkable exception to the imperfection of the osseous formation in the internal ear. The bones of the internal ear are completely formed—are very much larger, in comparison, than the same bones in the adult; nay, they are almost actually as large in a fœtus at birth, as in the adult body. A confirmation of this truth we see in this preparation [presenting it]. But inasmuch as these bones appertain to an organ of sense, they may be rather considered as appendages to the nervous system, than a part of the true skeleton; and all the organs of sense are very fully perfected in the fœtus—of which the eye affords us a very striking example.

Brain.—There are some peculiarities in the brain of the fœtus, whose component parts are each developed at different periods of utero gestation; but as an enumeration of them would be tedious, and comparatively unprofitable, I shall pass them over without notice, and refer those of you who are interested in the subject to Professor Tiedemann's valuable work on "The Fœtal Brain."

Eye.—We observe a great peculiarity in the fœtal eye: not, indeed, in a fœtus of full time, but during the earlier stages of gestation. The lids are closed and attached for more than the first half of the period; and, until the seventh month is completed, the pupil is covered by an opaque membrane called the *membrana pupillaris*. It is adherent to the internal margin of the iris all around; it completely shuts up the pupil, and prevents the internal structure of the eye being visible. Here is a preparation [presenting it] shewing the appearance,—but imperfectly; for it is difficult to preserve this membrane so as to display it well. It begins to be absorbed as soon as seven months of utero gestation are completed, and then disappears very quickly. It therefore becomes a good test in endeavouring to ascertain whether or not the child has arrived at that period of intra-uterine life. If we perceive the membrana pupillaris distinctly, we may suppose it is not yet seven months old:—and this peculiarity taken in connexion with a line drawn from the vertex to the feet—observing the central situation of the line, as before laid down—will give us a good indication of this particular age. Should, however, the membrane have disappeared, we may suppose that the fœtus has passed seven months. What, then, is the use of the membrana pupillaris?—It has been described as a most beautiful provision of nature to protect the eye from being injured by the rapid change which must take place, in consequence of the momentary intromission of light, when the child is first born;—on the principle that the delicate retina could not bear the sudden application of such a powerful stimulus. This, however, cannot be its office; because it is absorbed two months previously to birth, and has totally disappeared before light is permitted to strike upon the nerve. Blumenbach has, perhaps, suggested the most rational office to this minute film. He says it is attached around the inner margin of the iris, for the purpose of keeping its loose floating curtain distended, during the growth of the eye-ball, lest it should get puckered into folds,—adhesion with the surrounding structures should take place,—and the value of the organ be entirely destroyed.

Thymus gland.—In the chest there are some striking peculiarities. Placed in the anterior mediastinum, we observe a body, fully as large as a common-sized chesnut,—

weighing at birth about 240 grs.—in structure allied to the conglomerate glands,—to which we give the name of *thymus gland*. It is situated behind the first and second bone of the sternum, over the pericardium, and covers the "vena innominata," and the arch of the aorta. It consists of two long cornua above, which run up into the neck, behind the clavicles, as high as near the thyroid gland, and two broad lobes below, which conceal the base of the heart, and the origin of the arteria innominata, and the left carotid and subclavian. It is formed, therefore, of a thoracic and cervical portion on each side; and the thoracic lobes are perfectly distinct from each other, being merely connected together by cellular substance;—so that it may truly be considered a double gland.

It is attached by cellular tissue to the sternum and origins of the sterno-hyoidei and thyroidei muscles, as well as the pericardium. The reflexions of the pleura on each side, forming the anterior mediastinum, make its lateral boundaries, and separate it from the lungs. In consistence it is pulpy, and liable to tear on the application of the slightest force. This softness is dependent on its peculiar structure, which is made up of two coils of knotty ropes, one in each division of the gland, having much the appearance of a string of beads. These two coils do not communicate with each other, but may both be unravelled to a considerable extent, and each contains a secreting cavity. The cavities open into a central reservoir, running spirally, or in a serpentine direction, through the thoracic part of the gland, being somewhat more straight in the cervical portion. There is one reservoir for each division of the gland, and they are both lined by a fine, villous, mucous membrane.

It is very liberally supplied with blood from the internal mammary and superior or inferior thyroideal arteries. The veins have rather a different course to the arteries; for although the internal mammary and thyroideal veins receive small branches from this gland, yet the two principal trunks which spring from the thoracic portions empty themselves into the "vena innominata."

No excretory duct has, as yet, been seen leading out of this body; and the absorbents, till lately, have not been well defined. My respected friend, Sir A. Cooper, indeed,—who has recently applied himself to the investigation of the thymus gland, and has produced a work, written with his usual talent and acuteness, that has added even to his widely-established reputation,—was only once able to inject the absorbents in the human subject. It is unnecessary for me to remark upon the care, diligence, and minuteness displayed by Sir Astley in all his anatomical investigations; and when I mention that he informed me his observations were made on more than seventy subjects, either at different periods of intra-uterine life, or soon after birth, you may easily imagine the difficulty there must be in detecting these vessels.

In the fœtal calf, however, the absorbent ducts are large and easily discovered; and the same eminent anatomist has clearly and beautifully demonstrated them in the preparations he has made. He has shewn that on the posterior surface of the organ numerous absorbent glands are situated, from which arise many ducts, and these all terminate in two,—one belonging to each lobe,—which eventually empty themselves into the superior cava, just at the point where the jugulars unite with that vein. They therefore carry the fluid of the thymus gland into the venous system; and although of large calibre, he believes them to be mere absorbent vessels, and not excretory ducts.

Its nerves are very minute. Haller says, "Nervi aut nulli aut minimi aliqui a phrenico ramo sunt." Sir A. Cooper states that "he has never been able to detect any branch from the phrenic going to the gland," but considers it supplied from the great sympathetic; and on one occasion he saw a filament from the junction of the great sympathetic and par vagum pass on the side of the thyroid gland to the thymus.

Both in the human subject, as well as other animals, the cells contained in the coils of ropes and the reservoirs, secrete a great abundance of white, lactiform fluid, perfectly similar to chyle, and apparently possessing its properties, which may—especially in the calf—be collected in sufficient quantity to make it the subject of chymical analysis. It has been found by Dr. Dowler to be composed of fibrin, albumen, muco-extractive matter, some of the animal salts, and a small quantity of free phosphoric acid; and Sir Astley, by the microscope, has discovered numerous white globules in it. He therefore considers that it "secretes all the component parts of the blood," and suggests, "as the thymus secretes all the parts of the blood—viz. albumen, fibrin, and particles—is it not probable that the gland is designed to prepare a fluid well fitted for the fœtal growth and nourishment from the blood of the mother, before the birth of the fœtus, and consequently before chyle is formed from food; and that this process continues a short time after birth, the quantity of fluid secreted by the thymus gradually declining as that of chylification becomes perfectly established?"

Hewson was of opinion that the thymus

gland formed the central particles of the red globules of the blood, and gave to the spleen the office of elaborating the vesicular or cortical portion, which afforded the peculiar colour; but in what way these become amalgamated, or how they acted on each other, he does not explain; and his researches in respect to the use of the thymus have fallen far short of the value of Sir Astley Cooper's.

At one time it was believed that this large gland was intended merely to fill up a space in the fœtal system which the lungs were destined to occupy on their evolution after the commencement of breathing life: and by other physiologists, that it was meant to absorb a certain quantity of blood not required by the lungs during the collapsed state of these organs; but which it gave freely to them when their vessels became distended, owing to the changes produced by respiration. We cannot suppose that nature ever instituted such a bungling contrivance, as it is quite at variance with the nicety of her most trifling operations; and it is evident, both from its large size, great vascularity, and abundant secretion, that the thymus performs some most important function in the economy of the fœtus.

On the termination of intra-uterine existence, the use of the thymus seems almost to cease, for it soon begins to be absorbed, and gradually diminishes till the period of puberty, when nothing is left but a quantity of apparently condensed cellular substance, which is known by the name of the *remains* of the thymus gland. From Cooper's observations, it appears that at the end of three months of fœtal life, it is but just visible; from that time to the end of the seventh its increase is in proportion to the size of the embryo; but that from the seventh to the ninth its enlargement is out of all proportion to its former growth. It increases in bulk slowly even after birth, though its cells become almost immediately partially obliterated; and it is not till the end of the first year that its size begins to decrease.

When we reflect that most organs, on the natural cessation of their functions, are very liable to take upon themselves diseased action,—as we see strongly exemplified in the uterus and mamma,—we should suppose that the thymus, after fœtal life was ended, would be highly predisposed to degenerate into organic derangement. This, however, we find not to be the case; for it only once occurred to Dr. Bailey, during his long and valuable life, to observe this gland in a state of morbid enlargement; and Sir Astley Cooper mentions, that in the course of more than forty years' experience, he has only witnessed one example of it: this was in a female, nineteen years of age. It by chance occurred to me to be requested to open the body of a lad of seventeen, whose death was produced by an enlargement of the thymus gland. He was of a highly scrofulous habit, and the offspring of scrofulous parents. He had for many months been the subject of occasional attacks of dyspnœa, but never incapacitated from attending his duties as an under-clerk in a solicitor's office. He went to bed as well as usual, awoke in great distress in the middle of the night, suddenly raised his head and shoulders perpendicularly, shrieked loudly, and fell backwards, dead. I found the thymus gland indurated and enlarged nearly to the size of my two fists laid one over the other; and I suspected at the time it had caused death more by pressure on the blood-vessels of the neck, than by compressing the trachea.

Lungs.—The lungs of the fœtus exhibit appearances very different from the lungs of an adult: and it is of the greatest consequence that the changes these organs undergo should be strictly regarded; because a most interesting and delicate question is often referred to the decision of a medical man, in cases of suspected child murder, involving no less than the life of a fellow-being. He is required to determine whether the function of respiration had ever been performed; it being taken for granted that if the infant had not breathed, it was born dead. This question is principally answered by the examination of the lungs: and we shall proceed to consider the alterations in them consequent on respiration. In noticing so much of this subject as I deem necessary, I shall follow the line of argument adopted by Beck in his admirable work on Medical Jurisprudence.

Immediately on the commencement of breathing life, a very material change takes place in the circulation of the blood. The lungs,—which, during uterine existence, were in a collapsed state, occupying comparatively but a small space, and only containing that quantity of blood necessary for their nourishment,—become suddenly expanded and evolved;—air passes freely into the cells destined to receive it;—the bulk of each lung, and proportionate space which it occupies in the chest, becomes considerably increased;—and a large quantity of blood is determined to the pulmonary vessels, to be changed by the function of respiration. Thus, then, the actual size of the lungs becomes increased by the admission of atmospheric air;—their relative situation with regard to the other viscera of the chest becomes somewhat altered in consequence of this unfolding of their structure;—their absolute weight also is augmented by the large quantity of blood sent into the pulmonary vessels;—while

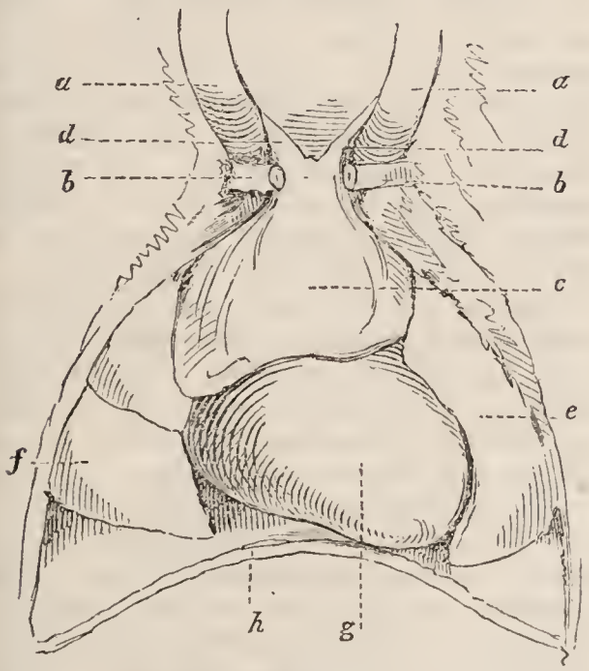
their specific gravity is greatly lessened from the air which they contain.

All these circumstances have been brought to bear in medico-legal investigations; and we shall see the degree of reliance which we may place on each of them separately and collectively.

Although there are other organs in all investigations of this nature to be minutely examined, we must here confine our observations to the lungs: and, as far as they are concerned, our principal attention is to be directed to their collapsed or evolved state, their colour, density, specific gravity, and the quantity of blood which they contain relatively to the whole body.

On examining a child that has never breathed, its thorax will be found flattened, or, as it were, slightly compressed. The lungs are dense,—of a reddish-brown colour,—giving no feeling of crepitation when pressed between the fingers,—comparatively small,—occupying only the sides and posterior part of the thorax,—not filling the cavity anteriorly,—but allowing a considerable portion of the heart, surrounded by the pericardium and the thymus gland, to display itself between their lobes. The pulmonary vessels will be found to contain little or no blood:—neither blood nor air bubbles will escape when the structure of the lung is divided. If the lungs be taken out of the thorax, and placed in water, they will sink gradually to the bottom of the vessel; and, according to Ploucquet, if their weight be compared to the weight of the whole fœtal body, they will be found to be to each other as 1 is to 67 or 70.

This preparation shews the relative situation of the thymus, lungs, and heart.



a a, carotid arteries. *b b*, clavicles. *c*, thoracic lobe of the thymus. *d d*, cervical cornua of the same gland. *e*, left lung. *f*, right lung; neither yet expanded. *g*, heart, covered by the pericardium; its principal part appearing between the collapsed lungs. *h*, diaphragm, very convex towards the chest.

The reverse of all this is met with in a child that has respired. The thorax is more arched, and its size augmented,—partly by the pushing forwards and upwards of the ribs,—and partly by the descent of the diaphragm; by which the convexity of that muscle towards the chest is much diminished: the lungs are dilated;—they fill more of the thoracic cavity, approaching each other more closely anteriorly;—and cover and hide the heart, all but its apex:—their colour is less deep, and the pulmonary arteries are, moreover, distended with blood:—they have an elastic feeling:—an incision into them will be followed by a flow of blood, mixed with bubbles of air, which will be extricated with a crepitus on their being squeezed. Their specific as well as absolute weight is also changed; and accordingly, when put into water, they will float upon its surface; and when compared with the whole weight of the body, they will be as 2 to 67 or 70:—or, in other words, the absolute weight of the lungs of a child that has breathed, is said to be double that of a fœtus previously to respiration. We shall presently see, however, that this test regarding the relative weight is not to be depended on.

Such, in general terms, are the changes in the pulmonary system caused by respiration; and when they all exist together, there can be but little doubt as to the child having breathed. Some of them, however, require a more minute examination; and I shall proceed, in the next lecture, to notice the floating of lungs in water, or, as it has been very properly designated, *the hydrostatic test*.

CLINICAL OBSERVATIONS

ON

WOUNDS OF THE HEART;

Their Causes—Symptoms—and Curative Indications.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

But a few years ago, observed M. Dupuytren, wounds of the heart were regarded as necessarily fatal, and numerous theses have been written to illustrate their certain and immediate fatality. Even still, notwithstanding the observations made at the Hôtel Dieu, and other hospitals, the contrary opinion is far from being generally admitted. It is, however, well made out by post-mortem examinations, that wounds which implicate the substance of the heart offer a chance of recovery, to whatever depth it has been penetrated, and whatsoever cavity may have been penetrated.

The examination of animals killed in the chase, in the substance of whose heart balls or well-marked cicatrices have been found; as well as those of individuals who have presented all the symptoms of wounds of the heart, and who, nevertheless, have perfectly recovered; the case, in particular, of a soldier, in whom, six years after the healing of a wound, a jagged ball was found in the right ventricle, near the apex of the organ, and partially covered by the pericardium;—confirms the justice of this view of the question. Accordingly, all well-informed persons admit that penetrating wounds of the ventricles or auricles, provided they be narrow, may not only fail to prove instantly mortal, but may even admit of being healed. Wounds of the heart, from penetrating instruments, come particularly under this observation. The acupuncture of the heart practised at Warsaw without any perceptible effect, in cholera, is another convincing proof. In this operation the point of the instrument separates and distends the fibres of the various tissues, and occupies their place without causing much pain, and without producing a solution of continuity; and when it is removed the parts return to their natural position, the opening is closed, and no loss of blood takes place.

It is not, therefore, surprising that simple wounds, such as the above, should be curable; but it may be imagined that the case is different when the wounds are made by instruments at once penetrating and cutting, or cutting only, and which, entering the cavities of the heart, make openings in their parietes of greater or less extent. If the wound be at all considerable—some lines, for instance—whether in the auricles or ventricles, death follows instantly, in consequence of the profusion of blood which deluges the chest. Several facts, however, demonstrate that death may not be so sudden as is usually supposed. The following case at the Hôtel Dieu is very conclusive—proving that a patient may be cured of a wound in the heart, which had not been recognized during life, and which might have escaped detection had not other complaints supervened which proved fatal, and thus afforded an opportunity of examining the heart.

Case I.—P. M. Geray, 34 years of age, a founder by trade, of middle stature, and bilio-nervous temperament, habitually enjoying good health, was brought to the hospital, Nov. 5, 1831, to be treated for several wounds. It was found on inquiry that he had gone to the house of his mistress in a state bordering on intoxication; he there found a man with whom he began to quarrel; a struggle ensued in which Geray received two thrusts with a knife—one in the belly, the other in the chest. Though grievously wounded, he could still walk and defend himself for some time; at last, however, he felt overcome, and had vomiting, but without any appearance of blood in what he brought up; the wound in the chest, however, bled profusely. On his arrival at the Hôtel Dieu these two wounds were recognized—one in the præcordial region, the other in the epigastrium. His face was pale, shrunk, and rather anxious; all the surface colourless *(décoloré)*; the pulse regular, but extremely feeble; the beatings of the heart were regular, but almost imperceptible. There was also a general and spasmodic tremor; but this appeared rather the result of a nervous impression than of loss of blood. The wounds were about six or seven lines in length, and they were situated—one at the base of the chest, between the fourth and fifth ribs of the left side; the other at three or four fingers' breadths from the umbilicus, on the same side. The first was perpendicular to the ribs, and touched the lower edge of the cartilage of the fourth rib; the second was nearly transverse. The lips of both wounds touched each other, and their extremities were united. These wounds, the angles of which were both equally sharp, appeared to have been made by an instrument at once penetrating and cutting. The judge of instruction, in fact, stated that the knife with which the murder was supposed to have been committed was pointed and sharp at both sides. The wound of the chest still bled a little, but there was no indication of its having been penetrated; the whole of the left side was sonorous—the respiration equal and regular; there was neither cough nor sanguineous expectoration. The wound in the abdomen had given exit to no effusion—solid, fluid, or gaseous; nor was there any symptom of effusion into the peritoneum. The wounds gave him but little pain; they were simply dressed with sticking plaister; and he was very tranquil. No alvine evacuation.

6th.—Chest and belly in same state; pulse raised a little, with some heat of skin, for which he was bled to eight ounces. His mistress came to see him, by which he was much agitated; but in the evening he was calm again.

7th.—Wounds in same state; skin rather hot, with some acceleration of the pulse: he was bled to eight ounces. The bleeding was practised at half-past nine: at eleven o'clock there was strong determination to the head, with loss of consciousness; great agitation; convulsions of all the muscles on the left side of the body; the mouth turned to the right side; and the lids of the left eye were not accurately adjusted to each other. There was sighing. The patient answered distinctly

all questions put to him, and complained of slight pain in the head. (Sinapism and a calming potion were prescribed.)

8th.—Same state. (Cupping behind the ears; whey with tartar emetic; ptisan.)

9th.—Made no complaint of the head, except when his attention was drawn to it. Left eye more sluggish in its perception of objects than the right. Still no stool. Wounds looking well. Left side of chest sonorous; auscultation presents the following phenomenon, but only at the site of the wound. One would say, that when the dilatation of the chest was complete, the air overcame an obstacle, and rapidly entered a cavity. Action of heart regular. (Cupping behind the ears; purgative clyster.)

10th.—Head not relieved; no stool. (A dose of sulphate of soda; sinapisms to feet; purgative clysters.)

11th.—Same state. (Remedies repeated, with the addition of a grain of tartar emetic.)

12th.—Tetanic rigidity of neck; lungs gorged; countenance becoming purplish; pulse losing its regularity. (Gum water; seton to back of neck.)

He died at 8 o'clock A.M. on the 13th.

Autopsy.—The stomach was found implicated in the abdominal injury, having a penetrating wound on its great curvature two lines in length, and opening into the cavity of the organ. The edges of the wound were almost in contact, partly agglutinated, and closed by mucus. The stomach contained no blood, and was not inflamed. There was no effusion into the peritoneum, which remained perfectly healthy. In the chest, the wound above described was attended with ecchymosis of surrounding textures. The cavity of the chest contained four ounces of blood. The intercostal artery on the lower edge of the fourth rib was wounded, and had furnished the blood which was found effused. There was a wound in the pericardium three lines and a half in extent. The left ventricle was wounded about the middle, and a little to the right; the wound penetrated its cavity, and had a transverse direction resembling the letter ⊍ reversed. It was three lines and a half across, and one line from above downwards. The external fibres were most separated, the opening diminishing gradually; so that the most internal fibres were in contact so as to close the wound. The cavity of the pericardium contained about an ounce of serum. In the right hemisphere of the brain some softening and slight vascular injection were observed.

The case above related leads to the conclusion that wounds of the heart, though eminently dangerous, are not necessarily fatal; and this, in a medico-legal point of view, gives rise to various important considerations. It is apparent, for instance, that wounds of the heart hold out a chance of recovery; nevertheless, in calculating upon such chance, the depth to which the instrument has penetrated must be taken into account, as well as the direction of the wound and the size and shape of the weapon, &c. Wounds implicating the heart vary in their situation and in their extent—they may be superficial or profound. The former involve only part of the parietes of the heart, the latter penetrate it completely; and there are cases on record where several of the walls have been present [so in the original]. The direction of the wound may be transverse to the greater number of fibres, or removed from this by various degrees; there being an unequal hiatus of the edges, dependent on these circumstances. When the instrument cuts a greater number of fibres across, the gaping of course is greater, and the flow of blood more copious than when the wound is parallel to the direction of the fibres. Now as the heart is composed of numerous layers of fibres running in different directions, it is evident that in a wound penetrating the cavities, if one such layer tends to separate its sides, others must tend to keep them together.

The extent of the wound also makes much difference in the chance of recovery; and this depends on the size and shape of the weapon, and on the force of the blow. The wound from a ball will, of course, be rounded; while it will be linear if the instrument be a thin blade, and lacerated and irregular if it be angular. Every part of the heart is liable to be wounded, but the left cavities are less so than the right. The right ventricle is more frequently laid open than the auricle, as also is the left ventricle opened more frequently than its auricle. Other circumstances being alike, a wound of the walls of the left ventricle is more likely to heal than a similar lesion of any other part of the heart. Wounds of the heart may be complicated with affections which do not necessarily accompany them—such as division of the intercostal artery; a large aperture in the abdominal parietes; wound of the lungs; diaphragm, &c. It is also necessary to take into account the moral condition of the patient at the time of receiving the wound—his age and general health. To shew how formidable wounds of the heart must be, it is only necessary to look at their immediate results, or at their consequences and complications. First in the rank comes hæmorrhage, whether primary or secondary—whether the source of it be the cavities of the heart, or its superficial vessels, or those of some other thoracic viscera. Then we have inflammation of

the heart itself, or of the pericardium or other parts; and another effect is the sudden suspension of the heart's pulsations. Nevertheless, severe as are such wounds, it is certain that in many cases they do not cause immediate death; that in others they are mistaken or overlooked, and that in some they are followed by cure. I have already related one remarkable case, and I shall now detail some others.

Case II.—*Several Wounds inflicted on the Heart, without causing any apparent symptom—Mutilation of the Genitals—Death at the end of twenty-five days.*

A man, 40 years of age, of large stature, dark complexion, and sombre physiognomy, being reduced to misery by misconduct and misfortunes, resolved to destroy himself. Having been thrown into prison, he had only an indifferent knife at his command; but with this he contrived, by dint of force and perseverance, to cut off the penis. He lost much blood, and was brought to the Hôtel Dieu. Six ligatures were applied to the dorsal, cavernous, and other arteries, and a sound introduced into the urethra. He was carefully watched, and some days passed tranquilly; but soon the delirium returned. He tore off the dressings, and ran about the ward during part of the night. The symptoms of cerebral excitement continued, and he died, in a state which might be called sub apoplectic, three weeks after the infliction of the mutilation. On examining the body, the meninges of the brain were found gorged with blood and serum; the substance of the brain injected and very congested.

The sternum being raised, a large ecchymosis was seen on the pericardium, the cavity of which was half filled with liquid blood. On examining into the source of this, numerous small wounds were seen on the anterior surface of the ventricles, filled with black fibrous clots. The truth was then suspected, and attentive scrutiny left no doubt of the origin of these wounds. At the centre of the ecchymosis of the pericardium, which occupied the upper and fore part of this, two very narrow penetrating wounds were found, which had become obliterated by false membrane. Inspection of the anterior parietes of the thorax led to the discovery, between the cartilages of the second and third rib on the left side the cicatrix, of a small wound: it was nearly round, and about a line and a half in diameter. Beneath the skin, and between the intercostals and the pleura, there was a considerable ecchymosis. The opening in the pleura was marked by a reddish brown point, with false membrane round it. The anterior edge of the lung was not implicated.

The little wounds of the heart amounted to five or six in number; most of them being in the right ventricle, which they obviously penetrated. One was lost in the inter-ventricular septum — another had reached the left ventricle, but without piercing it. The substance of the heart was pale, and broke easily between the fingers; the ventricles contained some black fibrous clots. The mucous membrane of the alimentary canal was in a state of chronic inflammation, as was that of the bladder.

The inquiries made with respect to this man, led to the discovery of his having had upon his person, when confined in prison, a long strong kind of needle used by operatives of his calling — that of a saddler. It was taken from him twenty-five days before his death; anterior to which time the wounds must have been inflicted, and the state of the external cicatrix entirely corresponded with this calculation. The narrowness of the wounds caused by this instrument had prevented them from producing much hæmorrhage—that is to say, that the blood of the right ventricle had not escaped into the pericardium; the quantity found there (about three ounces) being conjectured to have been furnished by the wounds in the ventricular parietes. It is certain that the pulse of this patient, which was very often examined, never shewed any thing remarkable. The region of the heart was not the seat of palpitation, nor afforded any anormal *bruit*. In fact there was no symptom whatever referable to the centre of circulation. Another important consideration afforded by this case, relates to the kind of mutilation practised,—some cases of which I shall relate to you.

[We have thought it better to detach these, and place them at the end of the lecture.—Translator.]

Case III.—*Three punctured Wounds penetrating the left Ventricle—Death at the end of 72 hours, from another cause.*

A man, about 30 years of age, resolved to put an end to himself; driven (as he said) to this extremity by misery. This, however, was not the true motive, which was afterwards discovered to have its origin in jealousy. For this purpose he sharpened a file at the point, and made five or six wounds with it; most of them in the præcordial region; a circumstance insisted upon by M. Dupuytren, because several were found to have implicated the heart. He bled a little by the mouth, and much more by the wounds. He was brought to the Hôtel Dieu, March 8, 1832, when it was remarked that a great deal of air issued by the wounds. This shewed that the chest had been penetrated. The respiration was very short and feeble; the pulse

small and irregular; and the patient so much reduced, that it was at first impossible to bleed him: his strength having rallied a little, he was bled; and this was repeated every time there was any vascular exacerbation. Thirty-six hours after the accident a remarkable phenomenon presented itself; the patient began to spit up thick stuff, which consisted of blood and pus mixed together. I thought it necessary to close the wound, both in order to prevent the introduction of air, and in order to arrest the hæmorrhage. In adopting this proceeding, I acted in conformity with the principles which have been laid down for the last twenty years, especially by M. Larry. I did not perceive that the respiration was more oppressed in consequence; I may even say, that the patient seemed tolerably well after the means used for his relief. This state, however, did not last, and he sunk on the 11th of March, being three days after the infliction of the wounds. Although the danger of his situation had never been overlooked or disguised, yet I must say that the fatal termination was hastened by his having seen his mistress, and been interrogated by a commissary of police.

I had the wounded parts removed, and shall examine them before you. In the integuments which cover the præcordial region you see at once five triangular wounds. According to the statements of the patient, the file with which they were inflicted was of this shape, but it must not be forgotten that a round instrument may make a triangular wound; and this circumstance, which is new in legal medicine, ought to be recollected by medical men in the reports made to the public authorities on such subjects. Two of the wounds, you will observe, are above the nipple, and three beneath it. The uppermost wound of all seems to have been inflicted with the greatest violence, for it is seen to have implicated a portion of rib. Considerable effusion had taken place into the pleura on both sides; the left bag contained air, black blood, partly fluid and partly coagulated, which, added to what flowed from the wound, may be reckoned at from three to four pounds. This blood would certainly have been evacuated externally had the wound been kept open. The lungs, pressed on every side, were collapsed as in empyema.

The left portion of the pericardium had three or four apertures in it; and in its cavity was about a table-spoonful of blood and pus. The instrument had wounded the left ventricle in three places, and each wound reached the interior. On blowing into the lungs the air was found to escape at three different points, corresponding to the wounds in the thoracic parietes. On opening the left ventricle, three little clots were observed in different parts; and, on introducing a probe from the external apertures, these clots were found to plug up the little openings on the inner surface.

These different wounds, of course, accounted sufficiently for the event; but still another question was—whence came the blood which flowed by the wound, and that found in the pleura? It does not seem to have been furnished by the lung, but by the intercostal artery, which was opened.

The case above related proves that wounds of the heart are not necessarily fatal. This patient lived more than 72 hours, though he had three wounds penetrating the left ventricle; and the histories of the two preceding shew that life may last much longer. Numerous other examples might be adduced to prove the same thing. In the thesis of M. Sanson, in particular, are numerous cases of this kind, in which it is shewn that a wound implicating both ventricles may be survived for twenty days. Again, the case of the soldier, related at the commencement of this lecture, is still more conclusive.

It is unnecessary to say that such wounds are extremely dangerous; still they are not altogether desperate. The symptoms which accompany wounds of the heart are not all of the same degree of importance, some being uncertain, while others are characteristic. The aspect of the præcordial region ought first to arrest our attention; if there be any wound here, accompanied by hæmorrhage, fainting, small pulse, cold extremities, vomiting, anxiety, oppression and sense of weight on the diaphragm, then there is ground for the liveliest apprehensions. To these signs of wound of the heart have been added, a peculiar tremor of that organ, inequality and feebleness of the pulse, very sharp fever, crepitation, and a particular *bruissement*. The diagnosis of wounds of the heart is very difficult to establish, because the symptoms are rarely all present; and it is this uncertainty which has led to the cure of perhaps many lesions of this organ being overlooked; but it is not the less certain that such cure is possible, and that there are positive instances of this kind. It ought therefore to be established, as a general rule, that all these wounds, however serious they may appear, should be treated as if they had not penetrated. The treatment to be followed in all such circumstances consists in bleeding, absolute rest, dressing the wound simply so as to arrest the flow of blood, and to prevent the entrance of air; and, lastly, to apply cold. The drink to be acidulated. As to the bleedings, they must be frequently repeated, and proportioned to the oppression of the breathing, and the strength of the sub-

ject. With respect to the mode of dressing, it must be such as to close the external wound. Whatever be the degree of difficulty in breathing, the extravasated blood must not be allowed to escape, unless instant suffocation be threatened, in which case a little blood must be allowed to flow; but, otherwise, it is important to keep in mind, that the opening of the chest ought never to be practised till the internal hæmorrhage has ceased, which may be known by the return of warmth and colour to the surface. It is necessary, however, to remove the dressings when the bleeding is thought to come from the intercostal artery. The cold ought to be applied as extensively as possible. The application of cupping glasses, particularly over the wounds, ought to be proscribed; this last, indeed, is only calculated to renew the internal hæmorrhage.

Internal remedies, such as digitalis, belladonna, &c. have been recommended, by way of controlling the action of the heart, but they are probably of little use.

ON VOLUNTARY MUTILATIONS.

One of the preceding cases having been attended with voluntary mutilation, practised upon himself by the patient, afforded M. Dupuytren an opportunity of explaining his views on this subject.

Voluntary mutilation of the genital organs, said the professor, are frequent, and constitute a very curious variety of monomania. Those who are driven to this extremity are for the most part of amorous disposition; and the predominance which the generative system has acquired is manifested even in the intellectual functions.

All authors who have treated of insanity allude to these mutilations, and agree in looking upon them as attended with but little danger in themselves; but persons affected with suicidal mania require the strictest watching, because they otherwise almost always succeed in destroying themselves. It would seem as if the sense of pain were weakened or destroyed: a blunt knife, which saws rather than cuts, one would suppose must give horrible torture; nevertheless it does not stop them. The vessels, being lacerated by this proceeding, bleed but little; and in many cases the cure is absolutely spontaneous.

These wounds have not all the same extent, and do not implicate the same parts: at one time the scrotum is attached, and one or both testicles removed; at another time the penis is cut at various distances from the root; while in some instances the whose apparatus is completely removed.

I saw a man, of middle age, reduced to despair by the misconduct of his daughter, make an incision into the base of the scrotum and penis, and cut through two-thirds of their substance. Re-union was effected by means of sutures, but the corpus cavernosum, when it was cut, became obliterated. The patient was cured of his wounds, but his was a case in which was presented the singular phenomenon of a semi-lateral erection, which gave to the penis an exceedingly ludicrous appearance.

I once saw a young man, half idiotic, who had complete obliteration of the corpora cavernosa about the middle. He had taken it into his head to put a ligature, drawn very tight, on the middle of the penis: it remained in its place for fifteen days. The skin and canal of the urethra became gangrenous, and the posterior portion only of the corpus cavernosum entered into the state of erection.

Jealousy is one of the most frequent exciting causes of the insanity which leads to these mutilations. A man, advanced in life, married a young and giddy female, of whose conduct he thought he had reason to complain. He determined to destroy himself; and with this view completely severed both testicles, with their envelope. His recovery was rapid. Soon after this he drowned himself. It is difficult to conceive by what singular aberration of mind this unfortunate person thus voluntarily deprived himself of the organs of virility. There is in this strange resolution a mystery of the human heart, calculated to exercise the ingenuity of naturalists.

These melancholy passions, however, are not the only ones which lead to mutilation: a great heavy-looking German shoemaker experienced venereal paroxisms, in which he used to mutilate the scrotum. Many deep cicatrices indicated extensive wounds. Little satisfied with the results which he obtained by these performances upon himself, he at length found an assistant, who carried his purpose into complete effect: a prostitute, seizing the moment of his ecstacy, divided the scrotum with a sharp knife, and removed one testicle, with much dexterity. This he scarcely felt, being plunged in a sort of stupor. On recovering from this, however, he was alarmed by the bleeding, and had himself conveyed to the Hôtel Dieu, where the wound was speedily healed.

Cases of this kind might be multiplied; but those we have already given will serve to shew that they are generally of little severity. No apprehension need be entertained about the introduction of sutures if the form of the wound requires them, the skin having a degree of *tolerance,* which removes all danger; and indeed the circumstances are altogether such as oppose the development of inflammation.

ON DENTITION;

WITH AN

ATTEMPT TO EXHIBIT THE OCCASIONAL PRESENCE OF CERTAIN DISEASED CONDITIONS OF THE BODY,

As connected with its Irregular States.

By Dr. Ashburner.

[Concluded from page 629.]

A normal train of development of the reproductive organs in the female is unattended by inconvenience. An anormal train entails hysteria. The hysteric tendency is, for the most part, not accompanied by circumstances entailing dangerous lesions of organs. It is different where anormal growths of the teeth and jaws inflict their penalties. A continued, unrelieved pressure upon a nerve in the jaw-bone, becomes attended by spasm, by convulsions, and may even terminate in death. A difficulty may, however, arise in distinguishing the nature and source of a clonic spasm. The analogy between the spasm of hysteria and that of epilepsy, is very close. In some cases it is not easy to say whether a person has had a fit of epilepsy or one of hysterics. A clonic spasm has been present, attended by fulness of the throat and a sense of choking; which may have been a degree of epilepsy, or a paroxysm of hysteria. A confusion of mind and loss of consciousness, vary only *in degree*. Epilepsy coinciding with anormal dentition, has no influence on the urinary organs, or, if any, its tendency is to suspend secretion; while these organs, being intimately allied to those of reproduction, respond to the agitation of hysteria.

There is in some constitutions an epileptic diathesis, having no connexion with anormal dentition. A tendency to form bone among the fibrous membranes of the encephalon, or to thicken the calvaria, may be present. This may be either congenital or acquired. In the cases that are decidedly congenital, the tendency to disease results, for the most part, as an hereditary disposition; and though the father and mother of the individual may not have exhibited marked symptoms of the complaint, an uncle or an aunt may have had fits. Often, however, some signs may have been present with the father, and the medical attendant, as well as the intimate friends, may have overlooked their relations to epilepsy. Whatever may be the antecedent or cause, the phenomena succeeding are very analogous.

In medicine it has been fashionable and convenient to speak of functional disorders. A function cannot be *perfectly* fulfilled unless the organ performing it be in a perfect state. The functions of an organ cannot be performed normally, without a normal condition of the organ. The brain can never be in a normal condition, where there is a diathesis rendering an individual prone to epilepsy. One or more of the signs of irritated nervous centre always accompanies the epileptic tendency. An individual may labour under this disposition, and yet never have had a complete fit. There is no disease in the nosological lists so various *in degree* as epilepsy. One may, for years of life, have had only an occasional loss of memory, and a confusion of mind, with dimness of sight accompanying it: *sometimes*, added to this, a sense of choking, or of a lump in the throat — or a sensation, or a pain in the ends of the collar-bone, near the spot where the sterno-cleido mastoideus muscle is inserted. A pulse very small and weak, or soft, full, and *very* slow, may often accompany some of these symptoms. For the most part the pulse is unusually slow: perhaps not in every case. If the digestion have not been good, the patient is drowsy, but has not a good night. He wakes up with a sense of numbness in one hand or the other; sometimes he is alarmed at this symptom, and a beating heart and some confusion ensue. Perhaps a cramp in the calf of the leg, or of the muscles of the foot, break up for a time the series of signs; but now and then all the symptoms are relieved, by a curious change of state in the individual—a slight, or, according to circumstances, a more severe shivering fit; then a clammy state of the hands and feet, and a cold perspiration all over the body, followed by a headache, or an unconquerable drowsiness, which, however, does not always end in a refreshing sleep. A clammy mouth succeeds, with a loaded tongue; often with a fœtid breath, and irritable capricious temper—an unhappy state of mind. The brain sends messages of weary discontent and inactivity to the liver; that organ becomes sluggish, sometimes enlarges,

and contains quantities of packed yellow bile; at others accumulates vitiated dark bile. The bowels are obstinately costive, unless a dose of mercury opens the biliary flood-gates, when an angry accumulation of pungent material stimulates all the train of organs to action, and the brain is for a time relieved by the process; but it is only for a time. As soon as the stimulus is gone, the system resumes its tendency, and one or more of the signs of irritated nervous centre again exhibit themselves. Is it to be expected that, under such conditions, the organs of digestion will duly perform their functions? It is curious to observe how well, in many cases, they *appear* to perform their duty; in others, indigestion tells the patient early of the troubles inflicted by an absence of the healthy power of assimilating his food. The stomach, with all the energy the brain concentrates towards this organ, cannot long perfectly digest unchewed, bolted meat. Dogs are prone to be unusually sleepy when they have on their stomachs unmasticated food; and in our own race the same fact may be observed. Sleep, the ally of epilepsy, may, in some cases, allow the nervous power to act with exclusive energy in the stomach. It is not then invigorating, refreshing sleep; it is not then repose—it is oblivion. The food may be partially digested: when the time arrives for it to leave the stomach—when new arrangements are in progress—when the nervous power has to supply other organs with energy—something is wanting: a discomfort exists in the abdomen; often, too, about the head. This is the time when the medical art can afford relief. If the train be allowed to proceed, vitiated bile accumulates in the liver, and a fit may supervene. There are constitutions in which the epileptic diathesis shews itself in a desire to sleep and to snore, or to sleep without much snoring. The wakeful remission may be a train of caprice and ill temper, an ungovernable pride, or an imperious desire to have one's own way. Reason, sometimes the more tender affections, may modify the tendency of the paroxysm; but for the most part, where the epileptic diathesis exists with a large brain, these modifying circumstances have little influence; the individual liberates himself to degrading passions, and it is well if the salutary check of public opinion keeps him within decent bounds.

A very remarkable power of enduring extraordinary exertion without fatigue may occasionally be observed in persons who, with the epileptic tendency, possess a frame of firm structure. In India, such individuals have been able, under a burning sun, to take, with apparent impunity, during an indulgence in field sports, the same exercise which has thoroughly tired all the more healthy persons in company. This power of endurance is sometimes found in a frame which mingles the developments of two septenary periods. In such a case, the restoration of a harmonious balance overcomes the tendency to the formation of fits, and subsequent loss of intellect. In a case where the developments *appear* to be complete, the probabilities are that in time the error of the encephalon produces dementia.

There is a picture of another division of the class of persons prone to epilepsy. Whatever may be the signs of cerebral irritation which may be manifested in the patient, anxiety is the preponderant character of mind. The subject is anxious about trifles as well as about matters of more serious importance. Worry, fretfulness, vexation, mark the countenance, especially if the *res angusta domi* trouble the man. Anger is not so often the mode in which irritation of mind is exhibited; the disposition is amiable, and the patient becomes an object of interest. One feels deeply the want of power to arrest, sometimes even to divert, the train of evil which is in progress. The lineaments of the countenance, often so obedient to trains of thought, are here obedient to trains of which we have yet no cognizance. The bony as well as the muscular fabric, obey the laws forced upon them; and if this take place before the jaws have acquired an ample growth, an anormal development of the wise teeth may very materially aggravate the symptoms.

A variety of the epileptic condition is the disease called catalepsy. It is a part of the vanity which characterizes some minds, not to believe in the existence of this malady. Because they have not seen the presence of all the symptoms, and to the full degree described by some authors, it cannot, forsooth, have any existence. Mr. Aber-

nethy's great mind was not free from the weakness of disbelieving in catalepsy. Like every other disease, this one varies in *degree*. It is, in the same individual, sometimes much more severe than it is at others. Some persons are prone to have it in a heavier degree than others; some are much more easily frightened than others. One patient, in walking through the street, may be quite appalled at the approach of a runaway horse. The degree of appalment in another may be quite trifling. Women are commonly much more easily frightened at the approach of a drove of horned cattle in the streets than men; and women are more frequently the subjects of catalepsy than men. Fright, and sudden reception of new impressions, are apt in some constitutions to produce appalment—a degree of stun—the temporary loss, without sleep, of all ideas. In catalepsy this state exists without a change of condition in the voluntary muscles. The patient remains, appalled, in the attitude in which he is placed by a bye-stander. One of the most remarkable signs of catalepsy is a striking symptom too of epilepsy—the loss of consciousness regarding all that is passing around—a condition that a patient well named one of perfect obliviousness.

A young woman, seventeen years of age, was brought to me by her mother, with a story that one incredulous about catalepsy would not believe. The girl had been a servant of all-work in a tradesman's family, and had had a very hard place. The mistress had complained much of the girl's stupidity, and had at last discharged her. The mother said it was true the girl had been lately more dull than she used to be, but that was accounted for by the state of her spirits. A fellow-servant in a former situation had been run over by a coach, and had died in a hospital in consequence of the injuries she had received. When the intelligence reached this poor girl she fell into a fit, gnashed her teeth, foamed at the mouth, and was quite insensible for more than two hours: it required several persons to hold her. Since that time, if any body spoke sharply to her, or came upon her suddenly, she was appalled, and remained staring, "vacant like," for some time. "If she happened to be standing, she would remain for several minutes: it was of no use speaking to her; she would stand still like an image." As she was coming to herself, she would be very nervous, get a shaking of her head, and *stammer* in endeavouring to speak. Latterly her spirits had been very bad, and she often burst into tears.

This girl had been, from her childhood, subject to an eruptive complaint about the elbows and knees, which had left her when she was seized with the fits. Her catamenia had vanished for more than six months, and her mother was very anxious to have "a prescription for stuff to bring them back." I looked into her mouth. She had thirty teeth, two of which, the first molares of the upper jaw, were quite decayed; they had never given her any pain. The last molares of the upper jaw were through; they had a blueish vitreous appearance, indicative of a want of health. The wise teeth of the lower jaw had yet to be cut, but the spaces for them were confined, and the gums over them very hard. There was overlapping in a remarkable degree of the incisor teeth. The first molares in the lower jaw differed from all the rest, in being imperfectly developed about their tubercles, in being yellow, and ill formed. I applied the gum-lancet to the hard gums, behind the inferior second molares, and divided them very freely. The girl bore the infliction well; then, in two minutes, complained that the pain went from the jaw to her head, and suddenly she became sick. She made ineffectual attempts to vomit. I placed her on a couch, thinking she was going to faint. Her extremities were cold, and consciousness seemed to have forsaken her. For nearly twenty minutes she remained in a state like that of sleep, her pulse beating 58, and soft. A moisture broke out on her forehead, and consciousness returned with sobbing. I prescribed first blue pill and rhubarb, on alternate nights. When the secretions became healthy, she took sulphates of potass and iron, with diluted sulphuric acid and water.

The catamenia returned, but not till after the teeth were clear of the gums. The aspect of the girl's countenance was much lighter, and her spirits were much better.

Illustrations of very slight degrees of cataleptic seizure are perhaps not so rare as might be imagined. It is not very

common to find them extending to fits of complete oblivion of mind, lasting for some hours.

An eminent physician, who had practised in a large provincial city, was passing through London. I met him in Regent-street, and the suddenness of my approach threw him into a state of obliviousness. He did not venture out without a companion, and the lady who was walking with him hinted that I had better call on him the next day. When I saw him again, he gave me a very clear account of the mode in which he was attacked. The fits of oblivion occurring sometimes twice in the course of the day, and being uncertain as to the periods of their accession, he was not able to trust himself out of his house without either a servant or a companion. He was at this time fifty-eight years of age, and had six years before been obliged to relinquish a lucrative practice from occasionally not being able to recollect even the faces of his patients when they appeared before him. He went away to travel on the continent, and journeying from place to place in Italy, where the classic ground ought to have raised emotions of great delight in a healthy mind, so well educated as this gentleman's, he had constantly to regret that a fit of oblivion attacked him when he was engaged in viewing scenes which were of deep interest to his fellow-travellers. I remarked a curious arrangement of the inferior incisors when his mouth opened: there were only three in a space which ought to be occupied by four teeth. I learned that one had been removed nearly eight years before. But if one had been extracted the room was now filled up, so that a pressure from the back part of the jaw had obliterated the vacant space, and caused a complete approximation of the edges of the two incisors left apart from each other. On looking into the mouth, it was found that the last molares, above and below, had never been cut,—that in the upper jaw the vis-a-tergo maxillæ had played sad havoc among the teeth: a few stumps were left, the immediate removal of which I advised. I cut away for him myself some cartilaginous obstructions to the progress of his wise teeth, which appeared, from long pressure, to have suffered in their integrity quite as much as the other teeth. He remained in London about a fortnight after, and told me that he was so much relieved of his oblivion fits as to be able to walk to my house without any want of confidence in himself: he required no companion.

Catalepsy with oblivion is not always distinct from epilepsy; nor is this complaint so distinct from hysteria as is often imagined. Trains of irritation, though perhaps not frequent, may occur in individuals peculiarly circumstanced, involving nerves supplying organs whose epochs of development may be very different. I was once consulted by a lady, who was poor, and who had seen better days, about her daugher, a fine well-made girl of nineteen. Two years before, this young lady had formed an intimacy with the apprentice of a tradesman, and her affections had become so much involved, that her health suffered from the disappointments to which she had been subjected. At first she had frequent hysteric fits, to which succeeded a very costive state of bowels, a peculiar fœtor of breath, an irregular and painful menstruation, which had from its commencement at fifteen years of age been painless and regular, and a frequent condition of stupor and oblivion that much alarmed her mother. Lately she had become subject to leucorrhœa, and on three occasions the discharge had ceased suddenly, and the young lady had at each time fallen down in an epileptic fit, foaming at the mouth, losing all consciousness, and grinding her teeth with great force. On examining the mouth, I found that the upper two wise teeth were well through, the two lower had peeped, but were yet much covered with gum. The incisor teeth of the lower jaw overlapped each other considerably. The first bicuspid teeth on each side were thrust outwards, and the second, or posterior, much thrust inwards. I asked, for I had frequently, with such an arrangement of teeth, observed the symptom, if a pain, fixed, and uneasy, like a stitch, did not trouble the patient under the margin of the ribs, on the left side. I was answered in the affirmative. I advised that the mother should overcome her scruples of pride, and permit the lovers to marry; she did so, and the young lady recovered completely.

It has been usual to ascribe to hysteria a variety of neuralgic affections to which young women are subject. The pain in the left hypochondrium, occurring especially in girls whose habits or occupations

are sedentary, is frequently placed to the account of hysterical affections. It occurs most frequently in young women between the ages of sixteen and twenty-two, or later, according to the cutting of the wise teeth; and seldom in women who are simply hysterical without the complication of anormal dentition. It would be easy to offer numerous cases of this wearing neuralgia, in which an overlapping of the incisor teeth, and a thrusting inwards, from their due alignement, of the bicuspid teeth, consequent upon the pressure from the back of the jaw during the development of the wise teeth, has been coincident with the pain, which has ceased when the normality between the teeth and jaw has been sufficiently re-established. A neuralgia of the abdomen, in which the girl can bear no pressure upon the surface, may be often traced to disordered function of the uterus. I have not yet sufficiently investigated this subject. Are there not conditions of the system in which a neuralgia or a spasm may result in inflammation? How the transition may supervene is another question, but occasionally the disease, which has commenced as a neuralgia or a spasm, has appeared to terminate as an inflammation. I reserve the illustrations of this position, with some others of no trifling importance, for further investigation; in the meantime I remain satisfied that I have drawn the attention of the profession to several points in the subject of cerebral disorder which are new and important in practice; to some others which are modifications of old notions; and to the whole subject of dentition, in its relations to the developments of the body, under a point of view not unimportant to the anatomical philosopher and practical physician.

RETROVERSION OF THE UTERUS.

To the Editor of the Medical Gazette.

Sir,

If you think the following case sufficiently interesting for the Medical Gazette, I will thank you to insert it; and remain, sir,

Your most obedient servant,

H. C. Sherwin,
Surgeon.

Hull, 12th Jan. 1834.

On 6th October last I was summoned to Mrs. ——, a young married woman, whom I found suffering under extreme pain. She said she had not made water for two days; that she had violent bearing down and straining; and that she must be going to miscarry, as she was then between three and four months gone with child. On examination per vaginam, I found a soft tumor nearly filling the pelvis, pressing from time to time with considerable force against the os externum, as though upon the point of expulsion. This proved to be the fundus uteri retroverted, which sufficiently accounted for all the symptoms. While the messenger was fetching me a catheter, I took occasion slightly to raise and press back the uterus from the neck of the bladder, which gave vent to a smart splash of urine. A few minutes afterwards I emptied her bladder by catheterism, and told her she would probably require the same instrument once or twice a-day for a fortnight—*i. e.* till she quickened—and then all would be right again as formerly. However, upon calling, according to promise, at bed time, to draw off the water, I was surprised to see my patient moving about with all imaginable elasticity and cheerfulness. After expressing my satisfaction at seeing her so free from uneasiness, she informed me that she did not want the operation, as she had found out a way to relieve herself; that recollecting the escape of urine while I was raising the tumor, she had got her husband to do the same (I suppose with his finger), and so she was enabled to empty the bladder. Of course I was no longer wanted, as her method was successfully practised daily, till she quickened. I think, sir, it can hardly be necessary for me to point out the advantages of this species of domestic surgery; since those who have witnessed and felt the great distress and inconvenience attendant upon these cases, will agree with me that there are occasions, especially when the medical attendant resides at some miles distance, when a nurse, or even a husband, may prove a very good deputy.

SECALE CORNUTUM IN HEMATEMESIS.

To the Editor of the Medical Gazette.

Sir,

Should you deem the following case of sufficient interest and practical value, as tending to confirm Dr. Negri's statement of the efficacy of the secale cornutum, I shall feel obliged by your inserting it.—I remain, sir,

Yours respectfully,
J. Ings, Surgeon.

Henley in Arden, Warwickshire,
Jan. 15, 1834.

Mrs. M. J., living at a village four miles from my residence, at one o'clock A.M. December 11, was seized with a violent fit of coughing, and profuse hæmatemesis. I employed the usual remedies and regimen; but failing to check it, being six months advanced in pregnancy, I proposed premature labour, as she was evidently sinking. It was immediately acceded to, which proved successful; but to my astonishment, a fortnight after her confinement the vomiting of blood returned as violently as before.

In the meantime having read the communication from Dr. Negri in your valuable publication, on the great benefit derived from the exhibition of the secale cornutum, I determined on giving it a trial. To my great satisfaction I found it had the effect of restraining the hæmorrhage. It is now three weeks nearly since I first administered the above remedy, and have discontinued it some time, my patient being in a state of convalescence.

ABSURDITY OF A GENERAL STANDARD OF MEDICAL EDUCATION.

To the Editor of the Medical Gazette.

Sir,

One of the most specious plans of our modern reformers is to establish an uniformity in medical education. Many of those who acknowledge the necessity and advantages of artificial distinctions in the profession of physic, who eschew the doctrines of the amalgamators, are yet anxious that all should receive the same kind of professional education. They would place the standard of medical education very high, but it should be demanded equally from all. They admit of inequalities in *practice*, but they uphold equality of education.

To shew the absurdity of this principle is the object of the present letter. You have on several occasions opposed the doctrine with great strength of argument; but it admits, I think, of still further elucidation.

Let us imagine the standard of education fixed—if you please, by Dr. James Somerville's own "Faculty or Academy." Let us suppose that five years of medical study are demanded from all, together with attendance on an hospital for two years; lectures, demonstrations, &c. &c. to their heart's content. What is to hinder the man who aspires to the highest honours in the profession to double all these numbers?—to impose upon himself ten years of medical study, and four years' attendance on an hospital?—to attend twice the number of lectures and demonstrations for twice the period prescribed by Dr. Somerville's "Faculty"? Will not such a person come forward with twice the claim upon public patronage which the "One Faculty" man can adduce? To make this system work effectively, not only must the "Faculty" define the amount of medical education, but it must *limit* it to that amount.

But again, sir, with reference to age. As the law stands at present, an apothecary may practise at 21, a surgeon at 22, and a physician (within seven miles of London) at 26. If the principle of equal education is to be acted upon, this system must, of course, be done away with, and all parties must be allowed to practise at the same period—viz. when the prescribed course of education has been completed. But which of these ages is to be assumed?—or is it intended that some age intermediate between 21 and 26 is to be the minimum?—or, lastly, do our equality Doctors mean to recommend that no one should undertake the responsibility of practice until he is near 30?

No matter which way you turn, difficulties insuperable stare you in the face the moment you begin to talk about *equality*. Equality of education is just as absurd as equality of rank, or equality of practice. So long as there are ine-

qualities of intellect, so long will it be ridiculous to attempt equalities of education.—I am, sir,

Your obedient servant,

A Reformer of Real but not of Imaginary Abuses.

London, Jan. 27, 1834.

ANALYSIS OF SARSAPARILLA.

MR. BATTLEY'S REPLY.

To the Editor of the Medical Gazette.

Sir,

I shall feel obliged by your insertion of the following reply to Mr. Ames's strictures on my recent analysis of sarsaparilla.

Mr. Ames has amused himself with criticising my words, instead of proving the incorrectness of my actual statements; for, with one or two exceptions, the erroneous opinions which he is pleased to attribute to me, are obvious perversions of my meaning.

The candid reader cannot fail to perceive, from the remarks which in my paper immediately precede the tables, that the term "indestructible principles" has reference to those substances which are found in the ashes of a body that has undergone incineration, *having been neither decomposed nor driven off by that process.* So long as my meaning is intelligible, I am not anxious to defend the propriety of the term against the attacks of hypercriticism. If, however, Mr. Ames imagines that the term principle is, or ought to be, always synonymous with *element*, it is sufficient for me that both chemical and pharmaceutical writers constantly apply it to many substances which admit of decomposition, as tan and gluten. For example, Dr. Henry, in his Elements of Experimental Chemistry, ed. 1829, vol. ii. p. 285, identifies gluten with gelatine, which he terms a well-known *principle;* and in the next page speaks of its *destruction.*

With regard to the coagulation of starch by boiling, if Mr. Ames, instead of quoting authorities, will dissolve a small quantity of starch in water at 150°, and filter and boil the solution, he will not be able to discover any coagulation, such as occurs on boiling albumen; no separation will take place, but the fluid will merely present an opaline appearance, as if it contained mucilage. But really I am at a loss to see the force of the objection: the decoction frequently did become opaque *on cooling*, when the quantity of starch was very large, as in the Lisbon.

I now come to some of the misrepresentations. He states that in the table No. 1 (Lima) div. roots, I attribute the deficiency, 124·5 grs.—the quantity by which the extract and residuum fall short of the quantity operated on—to an essential oil; although I have not only not ventured to assert that Lima sarsaparilla contains any essential oil, but have expressly shewn, at page 509, that after allowing for the quantity of "volatile matter absorbed by the distilled water" (only 30 grains from one pound), there still remained a considerable loss unaccounted for, concerning which I could only say, that it occurred in the process of evaporation.

When Mr. Ames can produce an extract and residuum which shall equal the original quantity, or account for the entire loss, of which the essential oil at all events forms but a very small part, I for my part will endeavour further to investigate the 10·6 grains of ashes which remained, after the separation of the substances recorded in the table. I have hinted, however, in the paper, that a portion at least consisted of potash.

He further states, that it would be supposed from the table that the muriatic and sulphuric acids, and the lime, existed in an uncombined state. I presume no chemist would suppose any thing of the kind. My object was to ascertain the substances contained in sarsaparilla; and if I have not carried the investigation further, and ascertained also the state of combination in which they exist, I am at a loss to conceive how that circumstance warrants Mr. Ames's inference. Hence, when I stated that water takes up portions of the oxide of iron and alumina, I intended to convey the simple fact, that these bodies (whether free or in a state of combination I do not here inquire) exist in the watery infusion.

Passing by the trifling remarks on the use of the word "precipitated," which only serve to shew the animus of the writer, I am ready to admit that the potash should not have been omitted in the tables. Unfortunately the quantity

had not always been recorded; and not having time to repeat the entire set of experiments, I could only state in the preliminary remarks, that in the experiments on which the tables were founded potash was generally detected, and in some measure supply the deficiency by adding to the tables a separate experiment, to shew the quantity contained in a given quantity of sarsaparilla.

I must again recommend Mr. Ames to repeat my experiments himself before he ventures to contradict them on the authority of others. The yellow matter taken up by cold ether, specific gravity ·723*, has the sensible qualities of wax, unites with fixed oils, and is almost entirely soluble in rectified oil of turpentine.

Mr. Ames then returns to the essential oil, and incorrectly states, that I infer that one pound of Jamaica sarsaparilla yields 90 grains, having previously made me assert still more absurdly, that two ounces of Lima (certainly inferior to Jamaica in this respect) yield 124·5. My words are not essential oil, but "volatile matter." I had indeed said, that the aroma of the distilled water, which I have elsewhere termed a volatile principle, was owing to a portion of essential oil being diffused in it; but I have no where said that essential oil constituted the whole, or the greater part, of the 90 grains of volatile matter which passed over in distillation. It would have been impossible to entertain such an idea, with the evidence before me of the far greater quantity of *other* volatile matter which continued to be driven off during evaporation, after the essential oil had been separated.

Mr. Ames concludes by quoting two passages from Berzelius, in order to prove that every real constituent of sarsaparilla which I have mentioned has been previously described; and constructs from these passages a table which, if it prove any thing, proves directly the reverse,—since, of nine constituents which he enumerates from my paper, seven are wanting in the list of Berzelius, viz. sulphuric and muriatic acids, potash, iron, alumina, lime, and wax. If Mr. Ames ventures to deny that any of these are *real* constituents, I answer, that I have preserved these separations at the Ophthalmic Laboratory, Moorfields, where the analysis was conducted, in order that they may be at all times ready for inspection, and that every part of the process has been recorded; and further, that I am ready and willing publicly to produce from the sarsaparilla any constituent which I have here named. On the other side, the existence of sugar in sarsaparilla is admitted to require confirmation; and with regard to pariljine and smilacine, I have not myself found them, and have been careful to mention nothing on the authority of others.

I remain, sir,
Your obedient servant,
RICHARD BATTLEY.

Ophthalmic Laboratory, Moorfields,
January 23, 1834.

* Incorrectly stated ·733 in the last number.

MEDICAL GAZETTE.

Saturday, February 1, 1834.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

SOCIETIES AT HOME AND ABROAD.

WE have had occasion of late, to allude more than once, to the undefined and anomalous mission of some of our medical societies which congregate on certain evenings of the week in this metropolis, to deliberate, to discuss, to talk about, *unscientific* questions; leaving no memorial of their labours,—no more than if they were written in water: though, certainly, we should not forget that the proceedings are regularly taken down by way of minutes, and sometimes make their way into the newspapers, much to the satisfaction, no doubt, of the talking parties. We recur for a moment to the subject; not on account of any claim it has to our notice on the score of its importance, but because we have just been amused with a lively sketch of some of the Parisian societies, which, it must be confessed, are well calculated to keep certain of

their London contemporaries in countenance.

Some change, we understand, has been found necessary in the Westminster Society, with respect to the mode of admission of members; in consequence, it would seem, either of some improper characters having recently been admitted, or perhaps having nearly succeeded in getting themselves enrolled, among the members. It is a good symptom, and we hope it will be properly followed up, in order to redeem, in some measure, the decidedly waning state of that Society.

There is or was, we believe, a Phrenological Society in London. That of Paris seems to have acquired a wonderfully *popular* character of late. It had on its list, at the commencement of its career, some scientific and respectable names: the French journals, however, inform us, that at a late sitting, there were received into its bosom a button-maker, of the Rue Richelieu, a tailor, and a hatter. As to the hatter, he might, to be sure, be no ineligible member, for he was probably an adept in the skull doctrines, being in the daily habit of taking measure of skulls. But for the tailor and the button-maker!—it is difficult to perceive the remotest relationship between those callings and the craniological philosophy: we should say that there was some mistake in the matter, but that the gentlemen have paid their fees and are regularly installed as titular members. The kindred society in London will, perhaps, not be sorry to be apprized of this fact, as it may bear them out in some similar doings of their own; for we have heard of some such.

Of the internal constitution of the Paris Academy of Medicine, some authentic intelligence has fallen in our way, which we may, at a future opportunity, bring more fully before our readers: at present we can only allude to the sort of business with which that learned body is usually for the most part occupied. Being a government concern it is frequently, as in the recent affair of the project of reform, called upon to answer the questions of the minister for the time being. It is accordingly occupied more with the affairs of ephemeral and successive ministries than with any transactions of its members, which would serve to endow it with a lasting and honourable reputation. Thus we have from them ever and anon abundance of reports on secret remedies, on the virtues of mineral waters, and on the great benefits to be derived by the public from the use of mercurial biscuits! Being divided also into a threefold partition of physicians, surgeons, and apothecaries, it is almost incredible with what apathy a *medical* question is entertained by two-thirds of the members, who are apothecaries and surgeons; while a *surgical* question is received quite as cavalierly by other two-thirds of the Academy, consisting of physicians and apothecaries. As to the *discussions*, it may be observed that they are wholly left in the hands of members of the Faculty who are engaged in the business of teaching, and have marvellous talents for talking: the *pure* academicians, it would seem, do nothing but vote.

MORE CONSISTENCY;

OR,

DR. GRANT ON THE USE OF "LOW EPITHETS."

Professor Grant, of the Gower-Street School, must be either a very simple, or a very wrong-headed man,—or both. Shortly after the commencement of his course, he introduced the Editor of the Lancet, by name, to his class; recommending him to their attention as the "castigator of the evil-doer," and the "rewarder of the good;" *i. e.* the libeller of all the most respectable men in

the profession, and the publisher of Dr. Grant's lectures on anatomy—in the absolute dearth of other matter. We took the liberty to laugh at the worthy Doctor's *gaucherie*, in betraying the extent of his gratitude; and the consequence has been, that the Medical Gazette has been made the subject of a lengthened valedictory address to his pupils, in a strain which strongly illustrates the importance which he attaches to our criticisms. He would have us believe that he is not in the least displeased on his *own* account, but is merely distressed at our "harrowing up the feelings of Mr. Wakley," to whom he says we apply "every low epithet, not excepting even those of falsehood, forgery, and blasphemy." Now if the learned Professor will tell us any gentler term by which an utter disregard of truth may be designated, than by calling it "falsehood;" or if he will furnish us with any other word than "forgery," by which penning a composition, and attaching to it the signature of another person, may be described; or any phrase save "blasphemy," by which references to Scripture for the purpose of scurrilous jibes, may be denounced—we say, if Dr. Grant will furnish us with a nomenclature for such depravities more suited to the atmosphere of Gower-street, we faithfully promise to adopt it. But is it possible that, while Dr. Grant betrayed to his class such virtuous and sensitive abhorrence of the very names attached to vice, he had no word—no hint—no tacit expression of dislike to the crimes themselves? Was his indignation so wrapt up in disapprobation of our venturing to call those turpitudes by their appropriate names, that he had no censure left to bestow upon their perpetration? Is the practice to be suffered to pass unnoticed, because the terms necessary to characterize it are harsh? Is the name to be condemned, and the reality connived at, or indirectly approved?

Dr. Grant's only apology for conduct so preposterous (though he does not offer it) must be, that he disbelieves our allegations. This, we apprehend, can only be affectation, because he feels how awkward the predicament in which he has otherwise placed himself—yet even this ground we shall take from beneath him. We charge him, then, before he has the imprudence and audacity to address his class again on this subject, to refer to the Lancet of Aug. 7, 1830; where he will find a forged letter from Dr. Ramsbotham—not, indeed, the only forgery to which we could refer, but remarkable as being actually acknowledged, in the next number, to have been the workmanship of the editor—a forgery committed *in joke!* Having done this, he may next turn to the article entitled "Jonah's Residence in the Whale's Belly accounted for on Physiological Principles," Lancet, vol. i. p. 304-5; or the comment on the miracle of our Saviour, in feeding the multitude on "three barley loaves and two small fishes," Lancet, vol. ix. p. 693: and if, in these passages, he does not find abundant proofs of blasphemy, then shall we acknowledge that we have misapplied the term, and unwarrantably "harrowed up the feelings" both of himself and his amiable friend. As to falsehoods, it would be insulting even to Dr. Grant's incredulity to refer him to particular passages; he may take any number of the journal indifferently, to supply himself with examples.

When, then, the Doctor next comes forward in a similar manner, let him do so boldly, and tell the simple truth, despite the moral degradation of the admission—that he praises his patron because his patron first praised him,—in keeping with a Scottish proverb, which it is quite clear the Doctor fully understands.

But it is impossible to be angry with the worthy Professor, for there is an extraordinary degree of *naïveté* even in

the outpourings of his wrath. He is indignant with us, as we have said, for applying the "low epithets"! above mentioned to his friend, and yet he, "good easy man," in the course of *one short page* of his address (for be it known that this most unique morsel is published), accuses us of "malice, jealousy, envy, and detraction;" of "rudeness and vulgarity;" of "meanness and vituperation;" of "slander, falsehood, and detraction," (*bis*)—of being "false and impertinent;" exciting his "disgust and contempt;" being, in fact, no better than "captious hirelings"!—"servile minions"!! and "impudent menials"!!! Tolerably well, we submit, this from a *Professor* to his pupils, declaiming at the same time against scurrility and the use of "low epithets." We are quite convinced by the preceding passages, that the joke about Dr. Grant *having lain three years on his face by the sea-shore gathering sponges and cockles*, must be founded in error: it is clear, from his choice command of language, and its entire freedom from "rudeness and vulgarity," that the learned Doctor must have spent the time alluded to in committing the leading articles of the Lancet to memory; nor can we for a moment doubt, after the above display, that he will be appointed to the sub-editorship as soon as a vacancy occurs.

And now a word or two to Dr. Grant before we part, in perfect sincerity and sober earnest. We regard him as having rendered himself, by his industry, a good comparative anatomist and a learned naturalist; but he is obviously very ignorant of the world and its ways. He has been mortified by our venturing to criticise his introductory lecture; and his vanity has been proportionally gratified by the circumstance of having his lectures published in the Lancet. Let him not, however, be deceived: he has not address enough, he may be assured, to injure us, were he to lecture against the Medical Gazette once a week; but there is one person whom he may injure, and that very seriously, though his friends may want moral courage to tell him who that individual is. Let him look around, and see who but he, with any pretensions to respectability, has the imprudence openly to recommend from the professorial chair the conductor of a publication which sets all morality, courtesy, and even decency, at defiance,—which outrages every feeling acknowledged among gentlemen, and violates every principle held sacred in society. While, waving all these considerations, his best friends will tell him that nothing can be more undignified, more unbecoming—we had almost said more childish—than carrying his disputes with any periodical, however influential he may know it to be, into the class-room, and submitting them to the arbitration of the young gentlemen who attend his lectures. He says we oppose the "liberal institutions of the country;" by which, of course, he means the "London University." Now to this we reply, that we supported the establishment with which he is connected originally, and are ready to do so again. We did but set our faces against a system of puffing which was matter of general notoriety, and was becoming a public nuisance. In doing this we were among its truest friends, and it affords us gratification to observe that nothing of the kind alluded to has recently appeared; an improvement which we trust we may attribute to the circumstance of the Professors themselves having obtained a more extensive share in its management. We hope yet to see it a great school of general as well as of medical science:—but then the "Faculty" must first learn to control its "unruly members."

COLLEGE OF PHYSICIANS.

The meetings for the season commenced on Monday the 27th, on which occasion the learned President was supported by Earl Grey, the Marquis of Lansdown, Lord Melbourne, Lord Althorp, Lord Duncannon, and other members of the administration; by the Bishop of London, and several dignitaries of the church; by the Lord Chief Justice of the King's Bench, and several other judges; while the room was more crowded than we have ever before seen it, with distinguished members of our own and other professions.

Sir Henry Halford read the paper which follows—remarkably happy in its subject, and characterized by that quick sagacity and tact, as well as ornamented with all those graces of literature, by which the learned author is wont to accommodate his addresses to a mixed audience of scholars and gentlemen.

ON

THE EDUCATION AND CONDUCT OF A PHYSICIAN.

By Sir Henry Halford, Bart. &c.&c.&c.

It was a favourite remark of a very accomplished Roman—Pomponius Atticus—that "sui cuique mores conciliant fortunam;" and the motto of William of Wykeham, to whom many of you have been indebted for your education, was, "Manners maketh man."

Now we shall do great injustice, both to the Roman senator and to the illustrious ecclesiastic of our own country, if we interpret the "mores" of the former and the "manners" of the latter by the mere personal demeanor of a man. They must be construed into his principles, his generous sentiments; what is in a soldier, his honour; in a lawyer, his integrity; in the churchman, his exemplary carriage and conduct; and in a physician, all that is enjoined in the oath of Hippocrates: not only a consummate knowledge of the resources of his art, but a gentleness of manner; a sacred reserve as to the affairs of families into which he may be admitted; a delicacy and a chastity proof against all temptation. In short, he must not have witnessed sacrifices to Moloch, or the rites of Flora, "ubi Cato spectator esse non potuit."

But manners, in this sense of the word, are the result of education. Uneducated man knows nothing of sentiment. He is governed by two predominant and paramount objects—the gratification of his passions, and the appropriation to himself of every thing to which he may take a fancy. Education, conducted upon Christian principles, eradicates this selfishness gradually, and finally makes him fit for society. He is taught to see the propriety, as well as the immediate advantages, of reciprocal kindness; of conceding something which he possesses to the wants of others, and of receiving in return similar accommodation. Presently he anticipates the wishes of his companion, and volunteers the gratification of them; and thus lays the foundation of a friendship in the "idem velle atque idem nolle." At length, by good examples, he acquires the essential principles of good breeding, "nunquam se præponens aliis, adversus nemini;" and as far as proper feelings are concerned, which are best obtained and improved by communication and close intercourse with those who possess them, he is so far prepared to fulfil his duties in society.

Whilst the "mores," the result and manifestation of the moral principle, are thus developed and enlarged,—in the process of which enlargement and development an uncompromising adherence to truth is rigidly enforced, as absolutely necessary to future character,—the reasoning faculties are strengthened, and the mind advances in power. A disposition to make observations on what is passing arises, and must be encouraged; comparisons must be instituted, in order to teach the drawing of correct inferences; a knowledge of mankind must be acquired, as far as books will teach it; the classics, those depositories of the wisdom of ancient days, which allure all men that are studious into that delicate and polished kind of learning, must be pored over night and day.

"———————— Vos exemplaria Græca
Nocturnâ versate manu, versate diurnâ."

But it should not be forgotten that it is a mistake, and a perversion of learning, when men study words and not matter, and fail to acquire something, when they read, which they can fairly call their own: for

"———————— Who reads
Incessantly, and to his reading brings not
A spirit and judgment, equal or superior,
Uncertain and unsettled still remains,
Deep vers'd in books, and shallow in himself."

MILTON.

But if the study of the classics be directed with judgment, it will be found that they exhibit the best models of order and of taste. In them may be traced the origin, progress, and decline of knowledge; they contain the history, and display the picture, of a world gone by, which has left specimens of the cultivation of the arts and of the efforts of human intellect, which no subsequent age has equalled, much less surpassed. Classical knowledge, therefore, will be applicable on ten thousand occasions, to illustrate and adorn science. It is interesting to each of the learned professions. To that of the lawyer, who, though he look no higher than the age of Justinian for the first systematic digest of law, yet may find, in the Greek and Roman orators, the most luminous expositions of complicated details, and the most powerful appeals to the feelings and to the reason of an audience. To that of the churchman, by presenting to him, amongst other attractions, a valuable system of ethics, though it be deficient in the great points of general benevolence and charity, and is altogether much inferior to that which we have all the happiness of possessing in the New Testament; nor can he fail to find a perfect intellectual enjoyment in comparing the songs of the favoured people of God with the beautiful hymns of Pagan poetry.

But to the physician, whose profession is of all countries and of every age, they are doubly attractive; because he perceives, in the ancient historians, the origin of many of the terms of his art, the earliest mention of some remedies whose value has since been confirmed by time and use, and in the poets the most touching descriptions of the effects of moral causes upon the health of the human system. To say nothing of the pure delight of such sources of innocent amusement as those which are opened in these fountains, and which are so well calculated to heighten the pleasures of future success, and to soften the adversities of possible disappointment.

The mathematics may now be cultivated with advantage, because they assist in forming the mind to clear perception and to accurate reasoning; and further, as they open the road which must hereafter be travelled in pursuit of all science. But with these studies must be mixed a large acquaintance with those divine truths which are the port and sabbath (to use Lord Bacon's words) of all human contemplations. It must never be forgotten, in any system of education, that religion is the cementing and preserving principle of civil society, and the source of all good and of all comfort.

A pupil thus sent forth accomplished in a virtuous discipline, fitted to procure him attention and respect in his place in society, may now commence the study of our profession; a profession which calls for the constant exercise of a quick perception, a sound judgment, a perfect knowledge of all the resources of our art, and an indefatigable industry: all which will be amply rewarded by what is better than honours and wealth—the blessings of thousands on his successful skill.

His first care will be to make himself fully acquainted with the curious structure of the human frame; the functions of every part in a state of health, and its deviations from that sane and healthy condition under diseases, the symptoms of which he must next learn to discriminate with the nicest care. After this, he will inform himself profoundly of the various remedies of our art; whether they be supplied by the botanist, or the chemist, or from whatever other source: and lastly, with the appropriate application of medicine to particular disease. I forbear to enter more minutely into the order in which lectures should be attended: every medical school has its own arrangements.

But it may not be unnecessary to guard the student against being seduced to pay a disproportionate attention to any one branch of the course. To become exclusively the botanist, or chemist, or even the anatomist, where the one great object is the cure of diseases, will narrow both his resources and his mind, and will make him incur the risk of a failure in the end. Philosophy, to an intellect now so well prepared to inves-

tigate its hidden truths, and to make discoveries in the ample field of general science, presents, it must be admitted, most seductive charms. But the example of Hercules, in the interesting story of his choice, must govern the student's conduct; and he will do well to remember the rebuke of Menedemus in the play—

"Chreme, tantumne est ab re tua otii tibi,
Aliena ut cures; eaque, nihil quæ ad te attinent."

No; the cure of diseases, I repeat it, is the physician's object; and he must not allow any thing to divert his eye from that great mark. Botany and chemistry, enchanting as they are, only furnish tools to the hands of the workmen: they are but subsidiary instruments, wherewith to execute, not to form, great designs.

Nor is it safe to attach himself to the consideration of some one particular disease. If exclusive and peculiar attention be given to *one* malady, with the ambition of acquiring early fame by it, suspicion will arise that this physician's mind is less comprehensive than is necessary to take in all the objects within the horizon of science. Nor is it less impolitic and prejudicial in another point of view; for if any one case turn out ill in the hands of such a person, his good name will be put into jeopardy immediately, on the conclusion (lame and impotent it may be) that if he could not cure a disease to which he had paid such extraordinary attention, how should he master another which had not duly engaged his mind?

Nor must he addict himself to any particular system, nor swear by the opinions of any master. He must exercise his own judgment, and be ready to profit of occasions, "scire uti foro," according to the Roman proverb; and to accommodate himself to circumstances as they arise, either by the adoption of a new treatment by new remedies, or by the use of accredited ones in new and unusual doses; remembering another remark of that great master of human nature, Terence:—

"Nunquam ita quisquam bene subducta ratione ad vitam fuit,
Quin res, ætas, usus semper aliquid apportet novi;
Aliquid moneat, ut illa, quæ te scire credas, nescias;
Et quæ tibi putaris prima, in experiundo repudies."

He must be patient, he *should* be healthy (for good health implies cheerfulness and the best condition of the temper), and disengaged from all other pursuits whatsoever. He ought to be kind, and strictly honourable to his associates. He should have a quick perception of propriety, a ready sense of the "quod decet et decorum est," and must not indulge in any peculiarity of humour or bad habit. If there be "some vicious mole of nature" in him—any thing which carries the stamp of one defect (to adopt Hamlet's phrase)—he must do his best to correct this:

"His virtues, else, (be they as pure as grace,
As infinite as man may undergo),
Shall, in the general censure, take corruption
From that particular fault."

He should possess a heart, though firm enough to encounter appalling scenes, yet full of sensibility and tenderness; one which shall respond quickly to the feelings of another, and so be likely to conciliate the sick man's confidence and attachment. Nor is this kind and tender feeling utterly incompatible with an unpolished manner: we have seen it united with a homely carriage, yet succeed in more than one memorable instance in our own time. But I would rather state it, that their powerful acquirements had made these estimable persons succeed, not *by* a bad manner, but *in spite* of it. This it is important to impress upon your minds, lest some of you be misled by their examples, unwittingly, to be careless of your demeanor, the sole trait of these great departed characters unworthy of your imitation.

I am tempted here to add, what Plato said to his master Socrates—that he was like the gallipots of the druggists', which had on the outside apes, and owls, and other grotesque figures, but contained within sovereign and precious balms; acknowledging, that to an external report he was not without superficial levities and deformities, but was inwardly replenished with excellent virtues and powers. But this good feeling of which I have spoken is necessary not to the patient alone, but to those who are surrounding his sick bed. He himself may have been rendered insensible, by the pressure of his disease, to the kindest offices of those who are attached to him; but they want the physician's balmy consolation to assuage the smart of their affliction; and as his sympathy will have been manifested in moments of tenderness, the impression it makes

will be remembered and acknowledged by future confidence and esteem.

Of his duty towards the family, in making them acquainted with the patient's danger as soon as himself shall perceive it, I have spoken on a former occasion; and you heard me with so much attention, that I need not trespass on your patience by repeating my observations.

So much for the proper education and conduct of a physician: and surely it will be allowed that a person gifted with a good intellect, so chastised and enlightened, increases the respectability of the profession generally, and creates a strong claim to the esteem of its members.

The point on which I presume to insist with most earnestness is the necessity of a preliminary, strict, and virtuous education. Having been taught to search for truth, the mind is better prepared to look for it, and to find it. To embark in an undertaking which requires so much thought as the attempt to unravel the perplexities of disease, without having learned the first principles of reasoning, can lead only to empiricism, or the practising upon receipts; and when that profession is to be exercised in the very interior of domestic privacy, unless the bad propensities of our nature shall have been subdued, and kept under severe habitual control by moral discipline, there will be danger perpetually of bringing the whole faculty into disrepute. Let these first principles be acquired carefully, and let the student's mind be taught to expand and enlarge itself by a knowledge of the wisdom of former ages;—let him converse with Plato, Aristotle, and Hippocrates; as Friend, and Mead, and Warren, and Heberden, and Sir George Baker did; and let reason and the moral sense, enlightened and strengthened by religion, have gained a firm ascendancy and rule over his passions. Let him be careful to adopt the sentiments and the manners of a gentleman, by preferring such associates as are distinguished by their elevation of mind, their sound principles, and their good manners: the latter have been classed amongst the minor virtues, and are better taught by example than by precept. It is indifferent to me where these acquisitions shall have been made, whether in our own universities or in foreign schools; for I am not so illiberal as to conclude that nothing attic can be taught *without* the walls of Athens. I know, however, that in our own universities good men are to be found, who are as incapable of an ignoble sentiment as of an unbecoming demeanor; and that sound learning,—such as will capacitate a man as well for the highest employments of the state, as for the less ambitious pursuit of our useful profession,—and the most efficient systems of moral discipline, are taught and practised. And if they must yield to the capital in the larger facilities afforded here of acquiring a familiarity with disease, and a knowledge of the practise of physic, be it so: their merit is not diminished by this consideration; for when the appetite for the knowledge that is wanted has been sharpened by the air and wholesome habits of the universities, if it do not find the food it desires there, it will migrate in search of it into whatever regions it is most likely to be found in. Harvey went to Padua, Mead to Utrecht, Sir George Baker to Leyden; and those physicians of later times, who, fired by the light of these brilliant examples, have endeavoured to tread in their steps, have sought, after due preliminary study, their physic in the successive schools of celebrity, as they have been eminent in their turn; and so has there never been wanting a succession of learned and able men, who have been distinguished by their great attainments, and have added a dignity to our profession, which has raised it pre-eminently in England above the consideration which it obtains in any other country in the world. ESTO PERPETUA!

Here I ought to stop; but it is impossible for me to allude to the discipline of an English university without dwelling for a moment on the character of the eminent Chancellor of Oxford, who has been taken from us so recently by death; and in whose life all the merits and advantages of that system of education were so conspicuously displayed.

Lord Grenville, though he was descended from a noble family which had served the country in successive generations of statesmen, yet laid the foundation of his own fame as a minister, at Oxford. I dare not presume to speak of the gravity and wisdom which he brought to political councils, in the presence of those illustrious persons who

were his associates in the cares of government, and who are, at the same time, the most competent, as well as the most candid, judges of his merit.

He had withdrawn himself many years from the rivalry of parties, and had sought his happiness in the bosom of his family, and his employment in a recourse to those studies by which he had distinguished himself in his early manhood. To value Lord Grenville as he deserved to be valued, it was necessary to know him in his interior and domestic life—

> "———— in his happier hour
> Of social converse, ill exchang'd for power."

Not that I would construe this expression in the exact sense in which the poet probably applied it to Walpole; for the conviviality of Lord Grenville was chaste and temperate, and his discourse altogether intellectual — Tusculan;—for his mind was fully imbued with literature, which flowed in conversation as from an inexhaustible fountain; and a daily accumulation of classic lore precluded that tedium of life which men, long engaged in the business of the world, are apt to feel so irksome and insupportable after they have retired to privacy. It was an essential advantage to him, moreover, in his valetudinary health, and assisted his physician much in administering to him under illness; for at every pause of his disorder he resumed his books, which disengaged him from a gloomy contemplation of his symptoms, and restored at once his spirit and his chcerfulness.

Nor was he less interested in the cause of science, nor less disposed or alert to assist its votaries by his counsel, and by the influence of his high offices: a proof of this we have before us daily in the magnificent museum of the late Mr. Hunter, purchased for the public during his administration, and for which the friends of medical science, and of natural history, have never ceased to feel grateful to his colleagues, now present, who assisted him in commending this great object to the munificence of parliament.

No day passed heavily with Lord Grenville: his enjoyment of the beauties of nature was exquisite, and he found their improvement by art a perpetual source of amusement and delight.

He was a scholar amongst scholars; an exemplary Christian in the midst of those whose duty and whose pleasure it is to encourage and confirm our faith in Christ.

His fondest wishes were for the prosperity of his country; his recreation, literature; and his comfort, religion.

MEDICAL REFORM.

LIVERPOOL PETITION.

A PUBLIC meeting was held last week in the Medical Library, Dr. Rutter in the chair, on which occasion the following resolution was passed, with only one dissentient voice. It points out some of the most important evils which at present exist in our medical polity, and which it is to be hoped we shall soon see remedied. The parties very judiciously limited themselves, like the members of the London Medical Society, to pointing out the "imperfections of the laws of the medical profession," but without dictating to the legislature. The "One Faculty" seems rather at a discount every where.

"The partial and restrictive distribution of privileges, legalized by the different charters at present possessed by the various colleges throughout Great Britain—the numerous sources of medical licenses—the discordant, and, in some instances, imperfect systems of professional education allowed by universities—the extremely defective preliminary classical education of great numbers of young men now introduced into the profession—the insufficient proof of competency, upon which individuals may gain legal permission to practise the art and science of medicine—the exclusion of persons (already recognized by British medical incorporations as duly qualified to exercise the healing art) from practising in certain districts—the improper interference of the Apothecaries' Act with the right of well-educated physicians and surgeons every where, but particularly in rural districts, to prepare and compound medicines for their own patients—the non-protection afforded to legitimate practitioners against collision with uneducated empirics—the tacit permission given to quacks and all unqualified persons to exercise the functions of educated members of the profession—and the fact, so universally prevalent, of druggists prescribing medicines, to the danger of his Majesty's subjects, as well as to the disadvantage and prejudice of those legally authorized, are circumstances which, in the opinion of this meeting, evidence the imperfections of the laws of the medical profession, and prove the necessity of legislative interference."

MR. TUCKER IN ANSWER TO MR. WAKLEY.

It will perhaps be remembered that we last week published a letter from Mr. Tucker, in which he contradicted in express and positive terms the statement contained in the Lancet of Jan. 18th, that Dr. Macleod had made a communication to Mr. Wakley, for the purpose of conciliating him. At the same time we mentioned that, as the sheet was passing the press, we had received the Lancet, containing not only the note from Mr. Tucker to us, but also a second letter, some loose expressions in which Mr. Wakley most impudently assumed as corroborating his original fiction; but of which we asserted, that "if not perfectly elegant as to language, it was at least unequivocal as to meaning," and that such meaning was confirmatory of *our* view of the case, and contradictory of that given in the Lancet. The following, which is a copy of a third letter — one that cannot be got over — addressed to the Editor of of the Lancet by Mr. Tucker, will shew the peculiar circumstances under which the second letter was written, explaining satisfactorily the want of perspicuity to which we alluded, and of which the Editor of the Lancet took so unfair an advantage. Mr. Tucker evidently supposes that Mr. Wakley misunderstood him; but we, who *know* our contemporary, have not charity enough to admit such excuse for his dishonesty; and though words cannot make the contradiction stronger, we should not be surprised if even yet—in the very lunacy of stubbornness and hatred—he were to reiterate the falsehood.

To the Editor of the Lancet.

Sir,

I must protest against the inference you are pleased to draw from my second letter; and I beg once more to repeat, in express terms, that *I never was authorized, directly or indirectly, by Dr. Macleod, to make any communication whatever to you;* moreover, I never told Dr. Macleod one word of what I had said of him to you. Let justice, then, be done on all sides. As far as *I* am concerned, I am most willing to submit to any investigation of this case; and if I can then be proved guilty of misrepresentation, I must endeavour to bear with patience the odium I should merit.

I should have been wanting in that duty which one man owes another, had I allowed Dr. Macleod to have remained unjustified. With this impression I wrote my first letter to you, and a similar one to the Editor of the Medical Gazette. Finding I had not in that letter (written on the spur of the moment) done you equal justice, I wrote a second. This also, which was well meant to both parties, has been misunderstood on your part, and taxed by the Editor of the Gazette with a want of elegance. Probably had either of you spent three successive and sleepless nights from home, attending those arduous duties which devolve on the accoucheur, great and undoubted as your talents are, you might have been found deficient when called on to write upon so delicate an occasion. I trust, sir, this may put an end to a very unpleasant subject; for being neither whig, radical, nor tory, I am desirous to have done with medical politics.—I remain, sir,

Your obedient servant,
J. H. Tucker.

17, Howland-Street,
Jan. 29, 1834.

[A copy of the preceding was sent us by Mr. Tucker.]

ROYAL INSTITUTION.

Friday, January 24, 1834.

Among the many excellent institutions of which this metropolis can boast, we know of none better entitled to the favour of the public than the one in Albemarle-street. Whether we consider the energy of its officers—the novelty and variety of the subjects discussed in its theatres—or the facilities afforded upon all occasions to the members and visitors,—we have no alternative but to praise. The evening meetings are now resumed, and from all we have heard we have reason to anticipate great things during the season, in the way of topics of interest for the *conversazioni*. They began auspiciously on Friday evening last, when a large assembly filled the library and the benches of the theatre. Dr.

Faraday, the organizer of those very delightful meetings, delivered a lecture

On the Powers of Platinum in producing Combinations of certain Gases.

It was the object of the lecturer to lay before his audience some facts which he had noticed in the course of his researches in the laboratory. He prefaced his observations with an allusion to the tendency which at present prevails, of reasoning rather upon groups of facts than from solitary instances. He quoted Sir John Herschel's authority as greatly influential in promoting this important change in the mode of modern philosophizing. Already, by pursuing such a plan, had several very valuable laws in natural philosophy been discovered. What Dr. Faraday had on the present occasion principally to notice, was some properties belonging to platinum, which seemed to lead to certain important principles relative to the action of solid bodies on gaseous substances. Upon performing the well-known experiment of decomposing water with discs of platinum, through the agency of the galvanic battery, and allowing the resulting gases to stand in the inverted tubes—the discs still immersed, but the power of the battery turned off—he was struck with the phenomenon of the rapid disappearance of those gases,—with their recombination, in fact, in consequence of the action of the platinum. The property of recombining those gases he found to belong to *perfectly clean* platinum; and this he shewed by experiment—first giving some valuable hints on the best mode of rendering the surfaces of the platinum free from all impurity, namely, by the application of potassa fusa to the warmed metal, and then washing in hot oil of vitriol. Without this precaution of having the surfaces accurately cleansed, the characteristic action of the platinum disc upon the gases could not be exhibited; and the audience were reminded, that the process through which the discs went, while employed in the decomposition of water, was one of thorough cleansing. Dr. Faraday then illustrated his subject by numerous experiments, and explanations of various phenomena regarding the action of platinum hitherto observed, but never satisfactorily accounted for: the coil of platinum wire, for example, which, being suspended over the flame in the Davy lamp, remains in a state of ignition after the flame has been extinguished; the little coil, also, which is superadded to the spirit-lamp, and now familiarly used as a pastile; and the effect of heated platinum suspended over a surface of ether; as well as why a heated glass rod in the same circumstances had a similar effect,—all these were explained. The spongy platinum, which in Dobereiner's lucifer combines the hydrogen jet with the oxygen of the atmosphere, becoming itself ignited in consequence of the condensation, was shewn to be an exception purely owing to the more liberal exposure of the surface of the metal in these circumstances than when it appears in a firmer state of aggregation. Many peculiar properties of the gases were brought before the audience: such as their extreme affinity for mixing with each other in spite of the laws of gravity (exemplified by Dalton's experiment of the phials containing hydrogen and oxygen, the former placed uppermost, and connected with the latter by a long capillary tube, yet being found, after a time, each to contain a mixture of oxygen and hydrogen)—their power of occupying the same space without compromising or interfering with each other's dimensions, &c. With these, and a variety of other popular illustrations, the lecture concluded. It is needless to add with how much pleasure it was listened to—a pleasure only mingled with regret that the hour allotted to it expired so soon.

The library was, as usual, supplied with numerous rarities calculated to engage the attention of the inquisitive. Among the principal articles on the table we noticed several specimens of ancient embalmment; some finery from foreign and savage nations; and, among other things, a trumpet formed of a human thigh-bone.

MIDDLESEX HOSPITAL.

To the Editor of the Medical Gazette.

Sir,

Should you deem the following cases of sufficient interest to occupy the pages of your publication, I shall feel obliged by your giving them an early insertion.

I am, sir,
Your obedient servant,
C.

Middlesex Hospital, Jan. 23, 1834.

Chest Disease, with violent Delirium—Recovery.

John Merrit, 25, ostler, was admitted into the Middlesex Hospital, under Dr. Hawkins, February 2d, with the following symptoms. Countenance is heavy and anxious; respirations, wholly abdominal and diaphragmatic, are 40, and short; pulse 120, easily compressed. He says he has occasionally pain under the right breast; that he has had a cough for two years, with scanty expectoration in the morning, but that it is not worse now.

He went to bed, on the 31st ult. intoxicated, and awoke the following morning

with acute pain over the false ribs on the right side, for which he got bled to ℥viij. without any relief; since which he has become worse. He confessed that he had been a hard spirit-drinker.

On examining the chest with the stethoscope, the respiration was inaudible over the two lower lobes of the right lung, and loud bronchophony was also noticed.

Ordered Cuc. Cruen. ad ℥xij. Lat. Dext. Pil. Cal. c. Ant. j. 6tis. Haust. Opii e. Antim. et Magn. Sulph. ℥j. hâc noet.

February 4th. — There is a peculiar sharpness in his manner this morning. He did not obtain much rest during the night. On percussing the chest, it emits a dull sound beneath the right pectoral muscle and under the left clavicle; over the latter spot is heard an increased resonance of the voice. Expectorates slightly a fluid, thick and glutinous in consistence, and green.

Pt. Pil. Cal. c. Ant. 6tis.

6th.—He is now become so wildly delirious and ungovernable that he is put under restraint. The pupils are contracted and sluggish; pulse 120, without power; body bathed in perspiration. Expectoration has ceased, and he has very little cough.

H. Seillæ C. 6tis, et Pil. 6tis horis intermediis. Emp. Canth. nuchæ.

9th.—Delirium continues, and is even more aggravated; is constantly hallooing to his companions and persons not present. Perspirations continue; pupils still contracted; thorax quite passive in respiration; pulse has gained somewhat in power.

Cuc. Cr. ad ℥x. nuchæ. Rep. Hst. Ant. hâc noet.

12th.—The cupper states that the blood drawn rapidly assumed a buffy coat, to an extent he scarcely before witnessed. He is now tranquil, and has had some sleep. Countenance less wild, and he answers rationally. From this period he rapidly became convalescent, and he was discharged well on the 4th of March. He returned in September, with a slight bronchial affection, when an examination was made. The left lung was quite free, but the two lower lobes of the right were still impermeable to air. He was stout, and expressed himself as being in better health than he ever remembered; owing, he believed, to his having abstained from spirit-drinking.

Pneumonia, with Delirium—Recovery.

John Trenter, æt. 30, a baker, admitted, under Dr. Hawkins, December 1st. Countenance wild; scalp hot; conjunctivæ injected; pulse 120, and full; tongue clean. He could give no account of himself, and those who brought him knew nothing of his state, except that he was seen at the hospital three days before and treated for a headache which he then complained of. It was now found necessary to restrain him in bed; but in so doing he evinced pain on pressing the chest. On examination, no air was heard to pass into the two lower lobes of the right lung, and there was loud bronchophony. Percussion also emitted a dull sound. The left lung was free. He was ordered

V. S. ad ℥xij. Cuc. Cr. ad ℥xvj. Lat. Dext. Pil. Cal. c. Ant. j. 6tis.

Dec. 2d.—Has been, and is still, furiously delirious. No disposition to sleep; passes his evacuations involuntarily; pupils are contracted; tongue now furred; scalp hotter; sordes about the lips and teeth.

Hirudines xij. Temp.

3d.—Has passed a quiet night, with six hours' calm sleep. Now expectorates, for the first time, a tough rusty mucus. Is rational. Gums tender. A loud and extensive crepitous râle heard over the two lower lobes of the right lung.

Pt. Pil. et Capt. Hst. Seillæ C. ter.

8th.—All the morbid sounds have continued, but gradually diminishing from day to day; the resonance is less; the percussion improved. The râle progressively passed from the lower lobe to the middle, and into the axilla, and may now be said to have subsided entirely. He is rapidly improving. Gums still sore.

Habt. Beef Tea Oj.

22d. — The respiratory murmur was heard over the edge of the lower right lobe on the 12th, and has steadily advanced upwards into all those parts where the returning crepitation was heard on the 3d. The shrill sound of the voice, and dulness on percussion, have in a corresponding manner gradually disappeared; and the whole right lung, although not so vesicular in character as the left, is every where permeable to air. He was discharged, quite well, on the 25th.

On reviewing the above cases, every one must be impressed with the value of auscultation as a diagnostic aid in detecting the existence and progress of inflammation within the chest.

The cough and expectoration characteristic of pneumonia were both absent in the early stages. The effect of this un-

favourable symptom was to produce an imperfect oxygenation of blood in the lungs, and a subsequent circulation of it through the brain, giving rise to the wild delirium which attended both cases.

It is practically important to notice, that if opium is at all admissible in such a condition of the sensorium, its exhibition must be preceded by some local depletion from the head; the vascular action is then brought nearer the natural standard, and the irritability consequent on depletion is thus judiciously avoided by the opiate. In the first case, the cerebral symptoms assumed some of the characters of delirium tremens: the previous confessions of his intemperate habits, and the relief he experienced for some time after from small opiates, confirmed this opinion.

In the latter case, the "crepitation de retour," under which term Laennec describes this râle, is the most unequivocal sign of approaching reparation and convalescence. The crepitus consequent on the pneumonia had no doubt existed prior to his admission, and the lung, from having become hepatized, would have passed into the third stage of disorganization, but that the remedies employed checked its further advancement. The progress of recovery, then, which is only to be recognized by the above sound, should be anxiously looked for and carefully watched. Let it not be mistaken for the crepitous râle of incipient inflammation, or the results will be serious—perhaps fatal; for nature resorts to those measures by which the lung is restored to its healthy condition; and if she is defeated, or even perplexed, in her operation, she may sink exhausted in the attempts she makes towards reparation.

CASE OF VAGITUS UTERINUS,

Before and after the Rupture of the Membranes.

By Dr. Heyfelder*.

Whether it is possible for a child in the womb to breathe and cry, is a question which has been variously mooted by medical men, but has never till now been set at rest. I confess I used always to think that the cases we have on record of vagitus uterinus previous to the rupture of the membranes, were all fabulous; for it is quite unaccountable how, under such circumstances, the air necessary for breathing and crying can reach the fœtus. This day, however (the 23d of September, 1833), my scepticism has been completely removed by the following case:—

The wife of a dyer, of the name of Holdevied, living in Gorheim, near Siegmaringen, a stout, well-made, healthy young woman, aged 24, was in labour of her first child. The pains had lasted for 48 hours. On examination, I found the abdomen regularly and firmly distended; the extremities of the fœtus were perceptible above the navel, towards the pit of the stomach; the orifice of the uterus was open to the extent of three inches, but the membranes were neither protruded in the intervals of, nor during the pains, which were not strong nor frequent. Immediately behind the membranes, however, lay the face of the child, in which, with my finger, I could distinguish the eyelids, the nose, and the mouth. So little liquor amnii was there present, that I at first thought there was nothing between my finger and the features of the infant, and that the membranes must have been ruptured previously to my arrival; but upon further examining the lips, I found the presence of a foreign membrane, which prevented the entrance of my finger into the mouth: and I should add, that the mouth itself, as well as the other parts of the face, lay between the upper and middle apertures of the pelvis.

While making this observation, and particularly at the moment of touching the lips, I suddenly heard a noise—it was the cry as of a new-born child beginning to respire. All who were present, the midwife, the husband, and the patient herself, heard it as well as I did, and testified their great surprise. This occurred in the short interval between two pains. I now considered it advisable to rupture the membranes, and did so, with proper precaution, immediately over the mouth of the child: *some* water was discharged, and the same cry which was already heard was repeated, but it was much more distinct, and continued longer than before. We heard it also soon after, for the third time, and not less clearly. The forceps were presently applied, and I succeeded, not without some little difficulty, in bringing into the world a pretty strong living infant.

Such a presentation as that in the foregoing case,—the parietes of the uterus not covering nor compressing the child's mouth,—must be peculiarly favourable for the occurrence of vagitus uterinus—at least *after* the rupture of the membranes. And it would seem that such a phenomenon can only occur where the pains are weak, and the contractions of the uterus not considerable. But I shall not enter

* From the *Medicinische Zeitung* of Berlin.

into any hypothesis to account for the occurrence of vagitus *before* the rupture of the membranes: I would only say, that it seems to be analogous to the chirping of the chick in the egg, first noticed by Meude, and too often attested since to be now gainsaid. And might not the deficiency of water between the membranes and the child's face, together with the peculiar presentation of the latter, have materially favoured the vagitus in the case just related?

IMPROVED PREPARATION OF EPSOM SALT.

Saturate any quantity of cold water with sulphate of magnesia; filter through paper, and add to every seven ounces of the solution one ounce of the *dilute* sulphuric acid of the Dublin or Edinburgh pharmacopœias.

Dose.—One table-spoonful in a wine-glass of water*.

In those cases in which the bowels are very easily moved, a single table-spoonful is sufficient to produce a considerable purgative effect.

In ordinary cases, a table-spoonful taken an hour or two before breakfast produces one or two evacuations immediately after breakfast.

In other cases the dose is to be repeated once or twice, at intervals of two or three hours, according to circumstances.

Where the symptoms are urgent, a table-spoonful may be given every hour until the effect is produced; and where the urgency is extreme, a saturated solution of the salt, containing only one-half of the above-mentioned quantity of acid, may be given in doses of two table-spoonfuls, repeated every hour.—*Edin. Med. and Surg. Journ.*

[Dr. Henry, of Dublin, by whom the above is recommended, gives *sixteen* reasons for preferring it, and adduces *eleven* arguments against the "black dose." — Ed. Gaz.]

CONTRACTION OF THE UTERUS AFTER DEATH.

The following case, communicated by Dr. Trüstedt, is interesting:—

"A woman who was under the care of Dr. Rudolphi died suddenly, at an advanced period of pregnancy, in consequence of an attack of febris intermittens apoplectica. Her death took place about four o'clock, P.M.; in an hour after which, she was removed from the bed and placed on some straw on the floor, covered with a sheet. A woman left in the room to watch the corpse, was, about midnight, greatly alarmed by hearing a noise proceeding from the part of the room where the body lay, and immediately alarmed the house, being persuaded that the deceased was coming to life. On examination, a full-grown dead child was found between the legs of the mother."—*Hecker's Medical Journal, and Dublin Journal.*

SUPERFŒTATION.

A married woman, twenty-two years of age, was brought to-bed of twins, in the lying-in hospital at Berlin, on the 25th of January, 1832. The children were both girls, and died in two hours after their birth: their birth took place before the end of the seventh month from the date of pregnancy. One child was white, the other evidently a half caste, as was indicated by the shape of its head and the leaden tinge of its face, hands, and feet, which in colour resembled those who have been tinged by taking nitrate of silver in large doses. The same difference of colour was strikingly evident in the umbilical cords of the infants, but not in the membranes or placenta. On inquiry, it appeared that she was in habits of intimacy with a negro, shortly after, or at the time, she had conceived by her husband!—*Ibid.*

FEBRIFUGE PROPERTIES OF SALICINE.

By M. Richelot*.

The bark of the white, crack, and Huntingdon willow, was long ago employed in the treatment of ague with various success; but its power over the disease appeared to be very questionable. The first chemists who analyzed it discovered in it no alkaline prineiple similar to quinine or cinchonine, and it gradually fell into disrepute. Fontana, however, maintained the existenee of

* Each table-spoonful contains about two drachms of sulphate of magnesia, and half a drachm of dilute sulphuric acid.

* Archives Générales de Médecine, Septembre 1833; and Edinburgh Medical and Surgical Journ.

a certain febrifuge principle, to which he gave the name of *Salicine*. His opinion has since been corroborated by Büchner, Rigatelli, and Leroux, the last of whom was the first to employ it in France. Numerous trials were made of it in various quarters, and, of course, from possessing the charm of novelty, its praises were sounded in no ordinary tone. Doubts, however, continued to be entertained, which were confirmed by the result of some trials made at La Charité by M. Pelletier, by which it appeared, that in his hands, *salicine*, though very bitter, seemed to be far less active than the principle of the cinchonas.

Dr. Richelot mentions the trials made by various of its supporters, the results of which appear to be altogether negative, while other experiments tended to show that it is possessed of no obvious febrifuge power. The doses given in these experiments varied from six to twenty-four grains. With the view of settling the question, M. Andral instituted several experiments, the particulars of which are recorded by M. Richelot. Ten patients of different sexes, whose ages varied from seventeen to thirty-eight, were selected for the purpose, and, after considering the results of these, as well as all that has been mentioned by others, M. Richelot comes to these conclusions:—1st, *Salicine* appears really to possess febrifuge qualities, but in so small a degree that we ought not to hesitate a moment in preferring the sulphate of quinine. 2d, *Salicine* may be employed in any case where irritation or inflammation exists, contra-indicating the employment of the sulphate of quinine, in hectic fevers with periodical paroxysms and abundant diarrhœa, or where sulphate of quinine cannot be had. 3d, It is not only unnecessary but injudicious to employ it at the beginning in high doses. Six or eight grains administered between the paroxysms, on the same principles as sulphate of quinine, produce as good or even better effects than higher doses, though, if necessary, the doses may be increased.

MEDICAL FORCE OF LONDON.

According to a list given in the Penny Magazine of this day (Feb. 1.), the number of physicians practising in the metropolis is 205—of surgeons 1306—of chemists and druggists 615—and of dentists 120. These numbers are gathered from the names and addresses in the Directory; but there is every reason to believe that they fall considerably short of the actual amount.

LITERARY INTELLIGENCE.

Dr. Weatherhead has in the press a New Synopsis of Nosology, founded on the Principles of Pathological Anatomy.

LIST OF NEW MEDICAL WORKS.

Paxton's Introduction to the Study of Human Anatomy, vol. ii. 8vo. 12s. bds.
Cyclopædia of Practical Medicine, vol. iii. royal 8vo. 30s. cloth.
Illustrations of Mr. S. Cooper's Surgical Dictionary. By W. P. Cocks. No. xli. 8vo. 2s. sd.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Jan.* 28, 1834.

Abscess	1	Hæmorrhage	1
Age and Debility	30	Heart, diseased	5
Apoplexy	4	Hooping-Cough	5
Asthma	16	Inflammation	21
Cancer	1	Bowels & Stomach	4
Childbirth	5	Lungs and Pleura	12
Consumption	74	Insanity	2
Convulsions	29	Liver, diseased	4
Croup	6	Measles	7
Dentition or Teething	9	Mortification	4
Dropsy	15	Paralysis	2
Dropsy on the Brain	16	Small-Pox	7
Dropsy on the Chest	1	Spasms	4
Erysipelas	1	Stone and Gravel	1
Fever	4	Thrush	1
Fever, Scarlet	11	Unknown Causes	5
Fever, Typhus	1		
Gout	3	Stillborn	17

Increase of Burials, as compared with the preceding week . . . 3

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Jan. 1834.	Thermometer.		Barometer.	
Thursday . 23	from 44	to 55	29·74	to 29·80
Friday . . 24	46	53	29·88	29·87
Saturday . 25	45	51	30 05	30 11
Sunday . . 26	39	51	30 07	29 90
Monday . . 27	44	53	29 78	29·72
Tuesday . . 28	46	55	29·44	29 28
Wednesday 29	31	38	30·04	30·28

Wind variable, S.W. prevailing.
Except the 25th and 29th, cloudy, with frequent rain.
Rain fallen, ·775 of an inch.

Charles Henry Adams.

NOTICE.

Spectator has our best thanks for his excellent letter.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 8, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XVII.

PECULIARITIES OF THE FŒTUS.

LUNGS.—THE HYDROSTATIC TEST.

Galen first pointed out the changes effected in the lungs by respiration. Through this means, says he, the substance of the lungs is transformed from a red, heavy, dense fabric, into one white, light, and spongy.

The knowledge, however, of this fact was not applied to forensic medicine until after the lapse of several centuries. About the year 1680, it would appear first to have attracted attention with this view, shortly prior to Morgagni's time, who speaks of it as an experiment first performed a few years before. Haller notices it particularly, and mentions some of the difficulties attending its practical application.

There is no question that can come before a medical jurist of greater importance, or more surrounded by difficulties, than the one which relates to the floating of the lungs in water, as a proof of the child having been born alive. At one time it was looked upon as an infallible test—no other investigation was thought necessary, if the lungs swam: and doubtless many an innocent creature has been doomed to death from the erroneous faith which was attached to this experiment. Dr. Hunter, however, who saw the danger and injustice of relying implicitly on this proof, shewed, in the strongest and most feeling language, that other causes besides natural respiration may give buoyancy to the lungs. He read a paper on the uncertainty of the signs of child-murder, on July 14, 1783, before the Medical Society of London; and as soon as his arguments became known to the profession, a complete revolution was effected in their sentiments: they soon went from one extreme to the other, and discarded the buoyancy of the lungs entirely as a test: and even lately, medical practitioners of repute have asserted, in a court of justice, that it is absurd, and has long since been exploded. This statement is as false as the other doctrine is dangerous. It would seem that Dr. Hunter was not the first person who noticed the fallacy of this experiment; for in the Gentleman's Magazine for December, 1762, is a letter on this subject, in which the writer states that, about three years before, he was present at Surgeons' Hall when "a learned gentleman" (no name mentioned), "while lecturing on the lungs, took occasion to state, that, from experiments on human infantile lungs, and those of brutes, which he had made, he was persuaded their sinking or swimming in water was not an infallible proof, as Dr. Gibson thought, of breathing having been performed, or of still-birth."

There are certainly some grave objections against the universal reception of the hydrostatic test: but it does not necessarily follow that it should be entirely discarded. The following are some of the strongest:—

A child may have been born dead, but the lungs may still float in water, in consequence of putrefaction having taken place. Under the putrefactive process a quantity of gas is generated; and this being entangled in the structure of the putrid organ, makes it specifically lighter than water, and therefore causes it to swim. Are there any marks, then, by which we can distinguish between air received into the lungs by breathing, and gas generated there by putrefaction?—With

eare we may usually discriminate pretty accurately.

It is remarked, that the parenchymatous structure of the lungs is less prone to putrefy than any other parts of the body, except the bones; and we may therefore fairly infer, that if the body generally is not in a putrid condition, the buoyancy of the lungs eannot be attributed to that cause. From many experiments made by Meyer and Beck, it appears that in the incipient stage of putrefaction lungs that have never respired will float for some days, but that they sink when putrefaction has gone to such an extent as to liberate the air which was generated. The result of these experiments perfectly agrees with the eommon observation respecting a drowned body. It rises to the surface when putrefaction has commenced, and again sinks when the air formed is extricated by the further destruction of the solid parts.

The fœtor which exhales from a putrid lung, and charaeterizes the gas that eseapes, is also a eireumstance that must not be passed over without remark.

The part of the viscus also in which the air is perceived will in some degree lead us to a right eonclusion. On this subject Dr. Hunter has laid down the following rule, which has been confirmed by the testimony of later writers:—"If the air which is in the lungs be that of respiration, the air-bubbles will hardly be visible to the naked eye; but if the air-bubbles be large, or if they run in lines along the fissures between the eomponent lobuli of the lungs, the air is certainly emphysematous, and not air which had been taken in by breathing."

Besides, when putrefaction has produced the gas, we find that it is first evolved near the surface, and as the process of decomposition advances, it is found nearer and nearer to the centre. Thus, if we cut out a pieee from the centre of a lung partially putrid, that portion will sink, while those parts nearer to the surface will swim. Whereas, if air has been admitted by respiration, the eentre will swim more readily than the parts nearer to the surface. William Hunter, indeed, says, that by one gasp the lungs are as eompletely filled as if inspiration had been continued. This observation, however, as we shall soon see, must be received with some limitation.

Another mode of judging whether this gas has been generated by putrefaction, will be found in the ease with which it can be extricated by pressure. M. Marc, in the Dictionnaire des Sciences Medicales, has strongly insisted on this point, as the most certain method of distinguishing putrefactive gas, from air taken in by respiration. He says, if you cut a pieee out of a putrid lung, and squeeze it strongly in the hand, the bubbles will burst—the gas will escape—it will become specifically heavier than water, and will consequently sink, although it swam buoyantly before:—while, on the eontrary, no eompression, however strong, will so eompletely force the air out of a lung that has respired, as to cause it to sink.

But let us suppose that putrefaction has gone on to a considerable extent in the subjeet under examination, and that the lungs partake of the general deeomposition;—is the medieal witness, under such a case, warranted in giving any opinion as to whether the air found in the lungs be that of respiration or putrid gas? Marc thinks, that even in the most exaggerated case we may diseriminate, beeause lungs which have once breathed possess a peeuliar crepitus when cut into, and retain it until their structure is perfeetly destroyed; and because by squeezing we can foree out the putrid air, and eause them to sink, which we cannot effeet in regard to the air of respiration. I must confess myself, under such eircumstances, I should be inclined to draw no inferenee from the buoyancy of the lungs, but would rather deduce an opinion from any other anatomical or physiological fact which I observed: and should there be no other data from which an opinion could be formed, I should leave the matter in the hands of the judge, candidly confessing that the research of medical scienee did not enable me to speak positively on the subject.

But even should the lungs float—should the air which they contain be found occupying the air cells,—and should no trace of putrefaction present itself,—does it necessarily follow that the child was born alive and destroyed wilfully?—Certainly not; it is not even a proof that the infant was born living: for it is possible by artificial inflation so to expand the lungs as to cause them to swim; and it is also possible that the mother may endeavour to restore her babe by breathing into its mouth: and thus her excessive tenderness, and desire for the child's well-being, may be the occasion of a most eruel and unjust verdict. Another occurrence equally lamentable may happen: the lungs may be inflated by a third party, with the infernal intent of throwing on the unfortunate female the stigma of child-murder, and rendering her amenable to its horrible penalties.

It has been stated, indeed, by Heister, Roederer, Brendel, and others, that the lungs cannot be artificially inflated to such an extent as to cause them to float; and that, —even if they could,—the mother would not possess strength enough to perform the operation herself, or sufficient knowledge

to do it properly. To the first of these objections I can give a positive denial from personal observation, as I have restored many children,—apparently born dead,—by artificial inflation. Others, also, who shewed no signs of life on their expulsion, have gasped a few times, and then ceased to breathe entirely, after attempts had been made to resuscitate them by the same means: and the lungs of such a child would float readily.

With regard to the second objection, it is certainly very improbable that the parent could succeed in inflating the lungs herself, by reason of her weak condition; but that would be no obstacle to its being done by another person.

We should expect to find, in a body whose lungs have been thus artificially inflated, the abdomen large and tympanitic, in consequence of the stomach and intestines containing a quantity of air; for it is more than probable, that by blowing into the mouth, air will pass down the œsophagus as well as the trachea; and no person but a medical man, or one having some knowledge of anatomy, could pass a tube into the trachea for the purpose of filling the lungs.

Another mode by which air may be received into the lungs has engaged much attention—viz. the possibility of a child respiring before it was completely born. I shall put out of the question the ridiculous and extravagant stories of children breathing and crying while the whole body was in utero; and the almost equally absurd idea, that under a face presentation a child could respire while the head was in the vagina: but it is by no means very uncommon for a child to gasp when the head is expelled before the shoulders are born; and such a gasp would be sufficient to send some air into all the pulmonary cells. There can be no doubt of the possibility of a child breathing before the shoulders are expelled; the only question is as to the likelihood of death taking place under such circumstances. It is said this can arise only from the following causes: either, 1. Debility of the child, or some malformation in its internal structure. 2. Pressure on the umbilical cord, interrupting the circulation. 3. The umbilical cord being twisted round the child's neck. 4. Preternatural enlargement of the body of the child; either from malformation or some tumor; and, 5. Want of sufficient uterine action to complete the delivery.

Malformation to such an extent may exist in the heart and large vessels as to prevent the continuance of life, although breathing had commenced: the want of the septem ventriculorum, for instance. But such deviations from natural structure would be evident on dissection.

Insufficient energy in the nervous system, or natural debility of the organs subservient to respiration, may certainly produce the infant's death; even after the process had been fully, though perhaps faintly, established. We should not expect that any examination, however minute, would be able to detect such a cause.

It is unlikely that pressure on the umbilical cord should cause death, after the head is born and the child has once respired; because, when breathing is established, the necessity for a continuance of the circulation through the umbilicus ceases, and therefore pressure on the cord can do little or no injury. Inasmuch, however, as the chest is embraced closely by the sides of the vagina and pelvic bones, such a degree of compression must be produced as will prevent the full expansion of the cavity and complete evolution of the lungs. Under such a state of imperfect respiration, it is by no means improbable that a child might be strangled, provided the uterus was inert, or any impediment existed in the body of the infant,—either from monstrous formation or tumors the consequence of disease,—to its perfect birth. It is, indeed, well known by obstetrical practitioners, that when a child gasps immediately after the expulsion of the head, its life is in some degree of danger; and it is recommended that extraction should be expedited for its own sake. It is generally believed that such a gasp will not occur while the circulation through the umbilical cord continues uninterrupted; but that it is the consequence of pressure on that organ; and, as being indicative of danger, may be followed by death.

It is by no means improbable that death might be caused by the cord being twisted around the neck: it is drawn tight on the protrusion of the child's body; and thus compression on its vessels and on the trachea being produced at the same time, strangulation may be the consequence. An instance of this kind came under my own observation. A patient of my own was delivered without assistance, and on my entering the room I found the child dead, lying on the bed, and the funis tightly embracing its neck; by which circumstance the blood was prevented circulating through its vessels, and breathing was also prevented by the constriction of the windpipe. On loosening the funis, a livid mark was strongly apparent, encircling the throat, caused by the funis being drawn tight, and shewing that the child was alive when expelled from the uterus. Had this case occurred to an unmarried

woman who had not confessed her situation, and had she been delivered alone, the probability is that a charge of child-murder would have been instituted; and it is also very likely that this livid mark would have been looked upon as a proof that the child had been voluntarily strangled by something purposely passed round the neck. It is an interesting and instructive case, because it shews how careful we should be in forming a conclusion, even when the proofs of guilt appear most evident. I had no opportunity of ascertaining whether the lungs contained air; but it is most likely the child had gasped once or twice, and if the hydrostatic test had been resorted to, a strong corroboration would have been drawn from their buoyancy. Another case of the like nature occurred to me in December 1832. On the expulsion of the head, I found the funis three times twisted round the child's neck. I endeavoured to extricate it by pulling it gently over the head, and was foiled. I was equally unsuccessful in being able to loosen the folds, so as to allow the body to pass through. During these attempts, the child gasped two or three times; when the uterus again acted strongly and expelled the shoulders. The cord was now drawn perfectly tight around the neck; respiration was suspended, as well as the circulation through the funis, and the breech being still in the pelvis, was retained there by the shortness of the twisted cord. The probability is, that the child would not have been perfectly born until the placenta was separated, and in the meantime would certainly have died. If such a child were to become the subject of judicial examination, all the appearances of its having been strangled after birth would shew themselves, and the verdict would most likely be accordingly. I was compelled to divide the funis, while it still encircled the neck, without tying it, in order to preserve the infant's life.

Should the preternatural size of the child's shoulders be the cause of delay in the expulsion of the body, or a tumor attached to any part, or effusion of fluid into the peritoneal cavity,—forming congenital ascites,—such a palpable deviation from the natural appearance could not escape the observation of the most inattentive inquirer.

It would be more difficult to arrive at the truth if a considerable period had elapsed between the expulsion of the head and the shoulders, from want of sufficient uterine action; and the child had breathed in the interval, and afterwards died. If a plea of this kind was made by the mother, —and that immediately,—I think it ought to have great weight; because it is not probable she would originate such an idea, and state it as an excuse for the child's death.

From a review of this part of our subject, it follows that, as soon as the head is born, breathing may be commenced;—that if but one gasp is made, air will be introduced into the lungs;—that if the breathing be vigorous and regular, such an occurrence gives the child the best chance of living;—but that inasmuch as the chest externally must be more or less compressed by the pelvis of the mother, the chance is, that the respiration will not be so complete as to allow of the continuance of life; provided the child remain in the same awkward situation for any length of time; and lastly,—that as children seldom breathe under such circumstances, unless the circulation through the funis be interrupted, if the mother's parts so closely surround the child's body, as to prevent the free action of the lungs, we are not to expect life can be continued, because the blood in all probability has ceased to circulate through the cord.

Another class of objections has been raised to the hydrostatic test, which has also tended to shake the faith of the profession in its accuracy.

It is stated that various kinds of disease may exist in the fœtal lungs, by which their specific gravity may be so increased, as to cause them to sink in water, although the subject has breathed freely; and therefore their not floating is no proof of still-birth.

This objection has been principally adduced from analogy with adult lungs. Numberless authorities might be quoted to prove that inflammation, œdema, hepatization, tubercles, schirrus, calculi, existing in the pulmonary tissue, may render the whole lung so much heavier than water, as to cause it to sink on immersion in that fluid. These diseases are by no means infrequent in the adult; and it is inferred that they may produce the same effect in the fœtus.

The truth is, that the lungs of the fœtus are very rarely unhealthy:—occasionally the rudiments of tubercular disease are detected, but very seldom, or never, to such an extent as to render them specifically heavier than water. This objection, then, rests upon a mere possibility: but even as such it demands our attention; and we have some reasonable grounds on which to form our judgment.

In the first place, if the lungs be so diseased as to sink, although breathing had been established, such a change in structure must be evident to the senses, and would of course influence our opinion; besides, if one gasp had been made, some air must have been admitted, and some of the

cells must be unfolded. If, therefore, on cutting the lungs into a number of small pieces, and throwing them separately into water, any of these pieces float,—while no evidences of putrefaction existed,—there can be no doubt as to the conclusion to be drawn.

It has been objected, that a child may breathe, and yet so feebly as not to fill the lungs. According to experiments made by Portal, it appears that the right lung is inflated before the left; and this is accounted for by the right bronchos being straighter, shorter, and wider, than the left; so that the air is admitted more readily through that tube. Dr. Hutchinson's more recent researches have established the same fact, and go to prove that the dilatation of the lungs is a gradual process, and that it will be more or less protracted, according to the vigour of the infant.

These experiments would disprove the observation of Dr. Hunter, which he said he knew from experience to be true, that "if a child makes but one gasp, and instantly dies, the lungs will swim in water as readily as if it had breathed longer, and had been strangled." Although we cannot reconcile these two contradictory opinions, the discrepancy fortunately possesses no influence practically; for if any portion of the cells be distended with air, we have a positive indication either that the child has breathed, or that artificial inflation has been practised: and, as in cases of disease, the lungs must be divided into a number of pieces, and these tested separately. If in this inquiry we find that the right lung floats, while the left sinks, or that portions only of the right float, we may presume that an attempt at respiration has been made, which has ceased either from the natural feebleness of the child, or some violence offered to it. If, on the other hand, the left should float more readily than the right, we might presume such buoyancy not to be the result of natural inspiration.

It is also objected, that a child may come into the world with animation suspended; and although it does not breathe, may still be alive, and in a short space may recover completely from this state of asphyxia. In such a case, provided it was destroyed before breathing had commenced, the lungs, containing no air, would necessarily sink.

The fact on which this objection is founded cannot be doubted, though the circumstance is comparatively rare: but I perfectly agree with Dr. Beck in thinking it a good rule to consider every child who has not breathed as still-born. Governed by such a rule, any error that may be committed will always be on the side of mercy. And I have always thought it of much greater importance to point out the fallacies that attach to the old belief—that breathing alone will cause the lungs to float—than minutely to investigate every single point on which their sinking may depend.

From the preceding examination of the hydrostatic test, we may safely draw the following conclusions:—1st, That if the lungs float, it must be from one of three causes—either natural respiration, putrefaction, or artificial inflation. 2d, That the mere floating is no proof of the child's being born alive, since the lungs may float from other causes besides respiration. 3d, That it is possible to distinguish between the floating of the lungs from putrefaction and that caused by inspiration; but difficult to distinguish between their floating from natural respiration and artificial introduction of air; and, 4th, That, with due precautions, the swimming of the lungs may be taken as a strong indication that the child has been born alive; although it cannot be depended upon as a certain and sure test.

Again, we have seen from the foregoing discussion, that the lungs of a still-born child will sink in water: but that it is not necessary the child should be born dead to produce that effect. The sinking of the lungs, therefore, must be dependent either on the child being born still, or with suspended animation;—on the respiration having been feeble and imperfect;—or on some disease of the lungs, rendering them specifically heavier than water. 2d, As all these causes may produce the sinking of the lungs, their not swimming is no sure proof of the child being still-born. 3d, But since we can generally distinguish between their sinking from respiration never having been performed, and from other causes, we may safely infer, that if due precaution is taken, the sinking of the lungs is a safe test that the child was still-born: and the experiment should never be omitted.

Ploucquet's test.—The uncertainties which surround the hydrostatic test called into notice the celebrated test of Professor Ploucquet of Tubingen, which is founded on the different quantities of blood, relatively to the weight of the body, which the lungs contain before and after breathing has commenced.

So long as the fœtus was dependent on its mother for the decarbonization of its blood, the circulation was carried on through the umbilical vessels to the placenta, and through other channels (the ductus venosus, ductus arteriosus, and foramen ovale), peculiar to uterine existence; very little, therefore, of that fluid was determined to the lungs. After separation from the parent, however, has taken

place, and breathing has commenced, these channels soon become impervious, and the pulmonary vessels, previously in a collapsed state, immediately become expanded, and admit at once a large quantity of blood.

Thus, then, although the specific gravity of the lungs is lessened by the introduction of air into their cells, their absolute weight is increased by the determination of so much blood to the pulmonary vessels. Ploucquet—as before noticed, indeed—from his experiments, concluded that the absolute weight of the lungs was doubled after breathing: thus, that during fœtal existence the lungs were in proportion to the weight of the whole body as 1 to 70; but that, after breathing had been established, they became as 1 to 35; and he looked upon this test as much more safe and free from error than the hydrostatic test, provided the results of future investigation bore out his observations. Unfortunately, however, this has proved not to be the case; and the repeated experiments made by MM. Chaussier, at Paris, and Schmitt, at Vienna, have decided—first, that in an infant which has not respired, there is no fixed proportion between the weight of the lungs and of the body; and secondly, that the weight of the lungs themselves is not uniformly doubled after breathing. In one instance, indeed, M. Chaussier found that the lungs of an infant which had not respired bore a proportion to the weight of the body as high as 1 to 23; while the lungs of another infant, which had breathed, were as 1 to 96: and the experiments of Hartmann lead us to conclude, that the proportion in weight of the lungs of a fœtus which has not breathed is as 1 to 59; and that of another, which has respired freely, is as 1 to 48,—leaving an average difference of only one-fifth, instead of one to two. These results are therefore conclusive, and have determined physicians to reject Ploucquet's mode of inquiry, as a test of still-born children.

Even were the method of examination proposed by Ploucquet decisive in regard to healthy lungs, disease might so far increase their actual weight, as to render their proportion to that of the whole body much greater than is natural. The putrefactive process might also have an influence; and aggravate the natural difficulties that embarrass us in the investigation.

The first inspiration.—Another question of great interest and curiosity naturally arises, on considering the change from the fœtal to respiratory life—How does the child first breathe? What causes it to make the primary effort at inspiration? We are in possession of many speculations on this subject, the chief of which I shall briefly mention. Some of these are founded upon mechanical, others on vital principles;—some of them consider the fœtus a mere passive body in the institution of the new process;—some that the commencement of the function depends on its own active exertions;—others, that it is forced upon the newly-born animal by the urgeney of necessity. Thus Pitcairne supposed that *the air, by its own gravity*, forced itself into the lungs, so as to distend their cells. But as the weight and elasticity, or resistance, of the air are equal, there must be the same pressure on the chest externally as on the larynx when the mouth is opened. If the chest could be placed under an air-pump, indeed, and the atmosphere exhausted, while the mouth was left exposed to the influence of the external air, we know the lungs would be distended mechanically, without any effort of the infant; and that the same would happen as well to a dead as a living child. But so long as the chest is surrounded by the identical atmosphere externally as rushes into the lungs, such a mechanical cause cannot operate. This objection, indeed, was not overlooked by Pitcairne himself; and to account for the elevation of the ribs, the descent of the diaphragm, and the enlargement of the thoracic cavity, he calls to his aid the inexplicable agency of the "animal spirits," with as little ceremony as the heathen deities were conjured up by Homer, to extricate his heroes from their difficulties; or, as the genii and fairies are thrust upon the scene in the enticing poetry of the eastern romances. Besides, you will sometimes remark in practice—a thing in itself sufficiently curious—that the child will sometimes attempt to breathe after the body is partly expelled, while the head is still in the vagina, before the mouth comes into contact with the atmospheric air at all. In cases of breech presentation,—or those which have been made so by the operation of turning,—I have frequently known a child make an effort at inspiration before the head was in the world; nay, occasionally before the arms and shoulders were born. Such an effort is evidenced by violent spasmodic contraction of the diaphragm, abdominal and intercostal muscles; and is always an indication of the funis being compressed, and the infant being in danger;—for so long as the circulation through the umbilical cord is unimpeded, no attempt at respiration will be made until after the whole body is expelled. Whenever, therefore, this spasmodic action of the muscles subservient to breathing is observed, the birth should be rather accelerated for the child's sake, although by so doing the mother may be exposed to some degree of danger from hæmorrhage. Again: Swammerdam conceived that there is a space between the

lungs and the parietes of the chest, filled with aqueous vapour, which, becoming condensed or expelled when the child is born, allows the air to pass through the trachea, and causes the lungs to be distended. Lister accounts for the first inspiration by the change in the circulation, which occurs from the closure of the fœtal sanguiferous ducts, and the sudden determination of such an increased quantity of blood through the pulmonary arteries. And the ingenious and talented Dr. Bostock explains it upon mechanical causes, when he states that "the first degree of expansion which is produced in the lungs of the newly-born infant depends merely upon the removal of external pressure, which permits the different parts of the trunk to assume their ordinary position."

Among those philosophers who attribute the primary attempts at respiration to the *active exertions of the fœtus itself*, may be mentioned Boerhaave and Buffon, who ascribe them to the struggles of the infant when it leaves the uterus; its muscles having been cramped under its passage through the pelvis. But Boyle and Vesalius first, as well as Haller and many other experimentalists since their time, have shewn that the lower animals, taken out of the womb by incisions, breathe as perfectly on exposure to air as if they had been born naturally: and we know the same occurs in the human subject.

The celebrated Wytt, whose opinions long maintained an ascendancy in some of the most distinguished schools of philosophy, would not allow that the commencement of the respiratory function arises from causes merely mechanical: he therefore recurs to a "sentient principle," and supposes that the fœtus is born with a natural propensity or appetite for air, similar to the sensations of hunger and thirst. This appetite, according to Wytt, throws certain muscles into action at the moment of birth, and thus the blood is sent in larger quantities than heretofore to the pulmonary organs. And Haller, presuming that the fœtus is nourished by the liquor amnii, attributes the first effort to the habit of swallowing which it has acquired while in utero. He supposes, that on its birth it opens its mouth in search of the accustomed food, and that air immediately rushes into the lungs. "Si animal in utero deglutit," says he, "si idem nixus extra uterum editus aerem invitat et haurit, crediderim causam inventam esse quare animal in lucem editum respiret. Cibum quærit, in quo natabat, aerem invenit, in quem se nunc demersit."

Elliotson gives the credit entirely to the sensation of cold which, according to him, the child must experience in emerging from its warm hiding-place. He presumes that this induces the diaphragm and intercostal muscles to contract; which very action produces incipient respiration.

Borelli and Soemmering confound the physical and final causes, and content themselves with resolving the question simply into the *necessity* that now exists for the fœtus performing for itself functions which had hitherto been exercised on its behalf by its parent; while Darwin infers that the same necessity is thrust upon it by the circulation through the umbilical cord being arrested: this producing an uneasy sensation, the whole muscles of the body are thrown into action—among others the diaphragm and intercostals;—and thus, to use his own expression, "respiration is discovered."

Blumenbach seems to attribute this fresh function to various causes acting in concert—namely, "the congestion of the aorta, from the obstruction of the umbilical vessels; the danger of suffocation from the cessation of those changes of the blood in regard to oxygen and carbon, hitherto produced in the placenta; the novel impression of that element into which the child, hitherto an aquatic being, is conveyed; the cooler temperature to which it is now exposed, and the many new stimuli which are applied."

Of the foregoing explanations, almost every one is as unsatisfactory as the other. The suffocation produced by the closure of the umbilical vessels, cannot occasion the change in the lungs, because the child breathes and cries before the circulation through the umbilicus is impeded; as you will have daily opportunities of witnessing. Neither can the cold striking on the surface of the body stimulate the muscles to contract; since a gasp is frequently observed before any sensation of cold can be experienced. Nor can we explain it on the principle of the mouth being opened in search of the accustomed food; as we have shewn that the fœtus does not swallow while in utero, and is not sustained by the circumambient fluid. We cannot well imagine a natural appetite for breathing; we cannot understand how the pressure of the atmosphere can be suddenly removed from the external surface of the thorax; and we know there is no space filled with aqueous vapour in the chest, between the lungs, and other parts.

With these difficulties, then, surrounding the commonly-received opinions, I have always attempted to explain the first inspiration on the principle of nervous excitability; and I suppose that the stimulus of the atmospheric air applied to the extremities of the cutaneous nerves, is the

efficient cause. We have a good opportunity of observing the stimulating effects of the atmosphere (and we presume that arises principally from the oxygen which it contains) on irritable ulcers. Whenever we take off the dressings from such a sore, unless it be thickly covered with pus, the patient will generally complain of a sharp pain, in consequence of the air coming into direct contact with the denuded surface. The same stimulus, in a mitigated degree, acts on the skin of a newly-born fœtus, hitherto unaccustomed to it. Now we know that the cutaneous nerves communicate most freely with each other, and that one part of the skin is supplied from the same source as the diaphragm—the great power employed in respiration. The phrenic nerve is derived from the second, third, and fourth cervical; and filaments both from the second and third supply the integuments of the back part of the head, jaw, shoulder, and the upper part of the back and chest. Thus, then, the diaphragm and coverings of the upper portion of the trunk,—parts remote in situation,——are connected by the direct sympathy of nervous communication; and we may easily imagine that any stimulus acting on the cutaneous extremities of one set of branches would be propagated to the other extremities of the same nerve, which ramify on the diaphragm;—the consequence of that stimulation would be the contraction of that muscle; this contraction would cause its descent, would enlarge the cavity of the chest, and admit the passage of the air into the lungs.

There are other nerves also which may participate in this stimulation, and contribute their share to the production of this function—such as the portio dura, glosso-pharyngeus, par vagum, accessory and "external respiratory," supplying the serratus magnus anticus; but I am inclined to attribute it principally to the agency of the phrenic. All these nerves arise from the same portion of the spinal marrow, and emanating from one centre, form a perfect series or system subservient to the act of breathing; as clearly demonstrated by Sir C. Bell, in his elaborate work on the Nervous System. The same justly-celebrated physiologist observes, that every dissector deserving the name of a student of anatomy, has been astonished and confounded at the display of the intricate ramifications of those nervous branches which supply the neck, throat, and chest. May not this arrangement be subservient to the first respiratory impulse?

We may presume that the stimulus applied to the cutaneous nerves is the principal agent, because if the child be born covered with the membranes, although the mouth be left exposed to the air, it will not breathe until the membranes are torn off, and the surface of its body more or less exposed. This fact I have had an opportunity of observing in more than one instance. Again, both Buffon and Haller have proved, that if an animal be expelled into warm water immediately from the uterus, although it lives for a considerable time, no attempt at respiration is made until it is removed from its bath, and brought under the influence of the air. Another circumstance confirming this opinion is, that stronger stimulants than the atmospheric air are sometimes required to cause the diaphragm to descend. Spirit is that most usually resorted to. One of the most common and efficient means of restoring a child apparently still-born, is to rub a little spirit over the back, shoulders, chest, and neck; and this stronger stimulus producing an effect upon the extremities of the cutaneous nerves, which were insensible to the impression of the atmospheric air, the diaphragm acts, and respiration is established.

That excitement on the surface alone will cause inspiration, has been fully proved by Beclard and others, who, on mechanically irritating the skin of fœtal kittens, still enclosed in their membranes, found efforts at breathing occur whenever the stimulus was applied.

The sudden sob produced on dashing cold water over the neck and chest of a girl under an hysterical faint, is an evidence of the close sympathy that exists between the cutaneous nerves ramifying over this part of the body particularly, and those supplying the diaphragm; and on plunging into a cold bath, it is evidently the impression on the upper part of the person that occasions the violent action in that muscle.

Lastly, we often find that a child is born somewhat in a state of coma, probably produced by the compression of its brain during its passage through the pelvis; when it lies without any attempt at inspiration. Under such a state of suspended animation its nervous energy may be often roused by giving it two or three smart slaps on its back, chest, and buttocks; it is then prepared to receive the impression of the atmospheric air, and it consequently moves and breathes. All these circumstances seem to prove that it is upon the principle of nervous excitability we are to explain the first attempt at respiration which the child makes.

CLINICAL LECTURE

ON

DISEASES OF THE NERVES OF THE HEAD.

Delivered at the Middlesex Hospital,

By Sir Charles Bell.

Gentlemen,—Wise men pursue some determined object. I may have erred in having more than one. I confess that it has been my desire to combine the philosophy of the profession with the practice of it, because I believe them to be necessary to each other, and both to the true respectability of the individual. Is it not strange that the prejudice of society should run against this association of objects, so natural and so just? But I have felt that it does; for on each occasion that has joined my name with science, it has been necessary to double my attention to practice—as the vulgar expression is, to work double tides or lose all, by losing that independence which cannot be better attained than through the practice of a profession like ours. I know that I address some who are eager in the pursuit of the higher parts of anatomy—of physiology. Let them take care to preserve that just balance which shall keep their minds capable of subtle inquiries, while their efforts are usefully directed by what they see of disease; for all real improvements in our science are suggested by the occurrences of practice.

You have asked me to give some observations on these cases of diseased nerves. I will not say that I have any serious difficulties in acceding to this; yet there is some delicacy required, arising from the place in which we are assembled; for I must say nothing which will impede the work of charity.

The effect of printing and reprinting averments, unsubstantiated from the beginning, is like story-telling. The motive with which they have been made—whether in diversion, mere merriment, or folly—whether in pique, or passion, or mistake—is forgotten, and, like a frequently-repeated story, they take the semblance of truth.

I remember very early in life to have been taken to visit an old gentleman—such a one as you will never see now, unless on the stage; he had the true square-toed shoes; his coat had square skirts and large sleeves, with a bit of lace; it had no collar, and a flowing wig hung down upon his breast. Though in his dotage, he was to us young folks a wonder and an admiration; besides that, he was a story-teller, and had taught himself to believe the wonders which he told. Among other things it pleased him to boast of his eyes. He said, that in his youth he could catch a flea by the hair of its back; and in saying this, he would bring the edges of his thumb-nails together, "sharpen up his brows—like an old tailor at his needle's eye," and look keen and animated, as if the insect were held struggling. His friends hung their heads; but we boys cared not how much the old man might make a fool of himself. With this moral picture I shall proceed to my subject, hoping that some statements connected with it, though groundless, are believed by the writer.

There is one good that has resulted to me from your request to look over these cases—viz. I have had my attention called to an excellent lecture by my colleague, Dr. Watson, upon diseases of the portio dura and the fifth pair of nerves*; and I recommend you to peruse it again, for it stands distinguished from all the papers which have been written on this subject, because the observations have been grounded on correct anatomy. Having referred to it, my duty is almost performed; but I think that it may be agreeable to you, in addition to having Dr. Watson's paper, to hear the train of reasoning, and succession of observations, by which I was enabled, at last, to come to the conclusions that I arrived at, on the functions of these nerves.

When I lectured upon anatomy, I devoted three weeks to the demonstration of the nervous system; and I very well recollect, on one occasion, having had a dissection before me, in which the nerves of the face, neck, and thorax, were exhibited, in all their apparent confusion; but the order and regularity of which you are now perfectly acquainted with: having given the lecture, I went in the evening to the country; and still reflecting upon the apparent confusion — the seeming irregularity — I said, there must be system here. Regarding the dissection with the principles in my mind which I had long before laid down, I took two sheets of letter-paper, and drew plans of the regular and irregular nerves. The class-drawings from these first sketches have, of course, long been worn out by use; but here [referring to them] are copies of them, the fourth, I may say, which have been made, and which I have borrowed from the London University. This plan, containing the fifth pair and the thirty spinal nerves, [presenting it] represents what I termed the *regular* nerves; and this [exhibiting it] the *irregular*, *superadded*, or *respiratory* nerves; separating them altogether from

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* This lecture will be found in our 12th volume, page 558.

the *sympathetic* system. Now when I placed the nerves included in the one plan over the other, the third over the second, and the second over the first, my pupils understood perfectly well the nature of the seeming confusion and irregularity of the nerves on the side of the neck and thorax. I take one of these drawings away, and I say, here you have all the nerves of the spine regular. Why are they regular? Because their origins are regular. And why are the ten nerves of the head, according to Willis, irregular? Because their origins are irregular. The columns of the spinal marrow, I said, being regular, the roots are regular, and every one spinal nerve is like another. The parts from which the nerves proceed in the brain are wrapt up together, presenting irregularity of the surface; and because the tracts of nervous matter are not expanded and regular, the nerves come off singly, with different powers or properties.

Long before this (1811) I wrote a little book, put it into the hands of my friends, and had it printed and distributed; it contained (excuse me in saying it) this great principle—that a nerve, whatever its nature may be, cannot perform two functions at once; it cannot convey sensation inwards to the sensorium, at the same moment that it carries outwards a mandate of the will to the muscles, whether it be through the means of a fluid, or an ether, or a vibration, or what you will, that it performs its function. Two vibrations cannot run counter through the same fibre, and at the same instant; two undulations cannot go in different directions through the same tube at the same moment; and therefore I conceived that the nerves must be different in their kind. This led me to experiment upon the nerves of the spine; for I said, where shall I be able to find a nerve with the roots separated? Where shall I be able to distinguish the properties of a compound nerve? By experimenting upon the separate roots of the spinal nerves. So, then, taking a fine instrument, the point of a needle, and drawing it first along one set of roots, and then along another, I found that as I touched one set—the anterior roots—it was like touching the key of a piano-forte—all the cords, as it were, the muscles, were in vibration; and when I touched the other, there was pain and struggling. That would not do; the animal being alive to sensation, there was confusion here; and therefore I struck the animal on the head, and then I made my experiments clearly: by which it was shewn, that the roots of these nerves were of different qualities, one obviously bestowing *motion;* and, by inference, the other bestowing *sensibility.*

Now see the course which I took. Having come to this conclusion, that the roots of the spinal nerves were double, in order that each might have a double function, I said—How is the head supplied? Is there any nerve in the head that has a resemblance to the nerves of the spine? Let us see what is the character of the nerves of the spine. I found, on minute inquiry into the distinctions of the two roots of the spinal nerve, that one had a ganglion and the other not. Then, going up to the head, I said—What nerve of the head has a ganglion? The fifth has a ganglion. We have the best authority,—not that of name, but anatomical authority,—for asserting that there is in the head a nerve, having, like the spinal nerves, a double root, and a ganglion upon one of these roots. See, then, how obviously the road is before us, when this point is ascertained. Now the function of the posterior root of the spinal nerve, or that which did not excite motion when irritated, may be disclosed to us by taking the fifth pair as a nerve of the same class. Experiments were made upon the three branches of the fifth pair in the face; and what was incomplete in the experiments upon the spinal nerves, was made perfectly clear by them. It was established, that branches proceeding from a ganglion, in all respects the same in structure as the ganglions of the spinal nerves, were the only nerves which bestowed sensibility on the head.

It has been said,—and it has been repeated and repeated so often that I hope and wish, if I do not perfectly credit it, that from the effect of repetition, these parties, like the old gentleman with the flea, believe what they assert,—that I gave it out that sensation and motion belonged to the anterior roots. How could that be? The principle upon which I proceeded,—the idea which I entertained for many years, that which forced me on to all these experiments,—was, that one filament could perform only one function: and for me to say that the anterior roots performed two functions, was just giving the whole matter up. It has been my misfortune to put all these things down in a large, heavy, dear book: were it generally read, which I learn from my bookseller it is not, I should have no occasion, at any time, to vindicate the originality or correctness of my observations.

When M. Magendie took up this subject, he had in his hands my original paper, in which the classification of the nerves, and the principles on which that classification is founded,—"that nerves arising from distinct roots are endowed with distinct functions,"—are all stated. He had copies of these plans which are now hung up beside me. The experiments upon the fifth nerve, which are detailed in that paper, and which were suggested to me by my previous experiments

upon the roots of the spinal nerves, were repeated before him in Paris by Mr. John Shaw, who had on various occasions made the experiments upon the spinal nerves before my pupils in Great Windmill-street, previous to visiting Paris. When M. Magendie performed the experiments upon the spinal nerves, I saw that he went a great deal too far—farther than he was entitled to go by his premises. I saw that he was stating what he could not state from experiments, because his experiments were the same as mine. I had made out part of the subject—viz. that which related to the functions of the posterior roots,—by inference, and then confirmed the whole by the decisive experiments upon the fifth pair. He pretended to make the thing clear by experiments upon those nerves which I had puzzled at in vain, in order to make clear by the very same experiments. Then, at an after period, he stated that the anterior roots had both sensibility and motion; and that the posterior roots had both sensation and motion! There the whole is given up: suppose that to be the case, and you have all in confusion. The principle is forgotten, which is, that one filament of a nerve cannot perform two offices which imply an influence conveyed in opposite directions.

Now the matter stands beautifully distinct in regard to the spinal nerves; and it is much better that it should come from another than from me. M. Müller has shewn that M. Magendie could not draw his conclusions, as to both sets of roots bestowing the power of motion and sensation, from experiments. He has repeated the experiments with the utmost care, insulating the distinct roots, and observing the effects when they are variously irritated. He has shewn that by experimenting upon frogs, the conclusions which I had announced are confirmed in a manner which admits of no question or doubt; and that one root—the anterior—is for motion alone, and the posterior for sensation alone.

It is asserted to have been my opinion, that the instinctive motions of the face were alone influenced by the portio dura. See how this matter stands. In the first paper that I gave to the public in the Royal Society's Transactions, the fifth nerve of the head was described as the spinal nerve of the head, as that nerve which had two roots, and a ganglion upon one of them,—one root which gave motion, and one which gave sensibility. What motion? The motion of *mastication;* that motion which is common to all animals that live. There is no creature that has a mouth, and feeds, but has the fifth nerve—that is to say, a nerve to feel with, and a nerve to feed with,—the manductory nerve, a nerve for the motion of the jaws in feeding, and for the sensibility necessary to feeding. That was the first idea that was presented in the paper, and the same idea prevails through the whole of this system.

Then comes the question, What is the meaning of there being a distinct nerve of motion in the face, the portio dura of the seventh, the facial nerve, the lesser sympathetic, as it used to be called? What is the meaning of every cavity within the head, and every surface without the head, being supplied with the fifth, and yet there comes another nerve? Here is the fifth spreading to all parts of the head, yet it bestows motion only on a limited class of muscles—those engaged in mastication—the muscles of the jaws. The portio dura courses close by the pterygoid, and, for many inches, directly over the masseter and temporal muscles; yet no anatomist, however minute a dissector, ever traced the smallest twig from it into these muscles. This is not like a thing of mere chance, but evinces some design. What is the use of that other nerve sent in addition to the fifth? My experiments proved the portio dura to be the nerve of motion to all the muscles of the side of the face, with the exception of the muscles of the jaws;—that it was the only nerve which controlled the motions of the forehead, of the eyelids, of the nostrils; with regard to the lips, I was led into a mistake in my first experiments, which Magendie corrected. I thought that the lips, besides obtaining the power of motion principally from the branches of the portio dura, were also, to a certain degree, under the control of branches prolonged from the motor root of the fifth pair: and this I conceived was for the purpose of associating the lips and the cheeks in the combined actions of mastication. I was in error as to the particular branch which is so prolonged to the cheeks—an error into which I should not have fallen, had I examined with more care, before my first experiments, the anatomy of the roots of the fifth pair, as it is given in several of the best German authors; but by subsequent inquiries, I did find that a nerve, coming distinctly from the motor root of the fifth, was distributed to the angle of the mouth. It is stated that I called the portio dura the *instinctive* nerve. I do not know what is meant by instinctive nerve: the word is, I believe, not once used in all my papers upon the nerves. I traced the portio dura backwards to its origin: I saw that it neither came like the anterior root of a spinal nerve, nor the posterior root. I found a class of nerves arising in the same line; and so I made out this plan of the irregular or superadded nerves. They go to the eye, the nostril, the tongue, the throat, the larynx, the trachea, the lungs, the œso-

phagus, the stomach, the muscles that raise the shoulders, the diaphragm, the serrati. Having made that out, what is the conclusion? That they are respiratory nerves; nerves which are going from one source—the source of active respiration—to all the parts necessarily combined in the act of respiration. That was my original idea, and the impression has never been changed.

PARALYSIS OF THE LEFT PORTIO DURA.

A young female, now a patient of the hospital, is the subject of this affection. The first thing which strikes the observer is the great want of expression, the unmeaningness of the look. I shall read the case through, and then comment on those parts which appear deserving of observation. "The patient is unable to move the muscles of the left side of the face; she is unable to frown, or close the eye-lid; the eye of the affected side is more prominent than the other; the sense of smell is perfect on this side; there is no deafness, nor alteration in taste or vision. When she attempts to blow, the left cheek flaps loosely; the mouth is accordingly drawn to the right side. There is no want of sensation in any part, and the muscles of mastication act equally on either side. The uvula appears relaxed; sometimes hanging to one side. These symptoms came on during the night, a week ago; but the patient was not sensible of her condition until told of it. She is deriving benefit from leeches and blisters behind the ear, and mild mercurials."

This is a common case—paralysis of the portio dura. The first thing that strikes you in the case, is the unmeaning look. It is very remarkable that all the expressions of passion, whether in the body or the face, depend upon the nerves of respiration. The next thing that I notice here, is the projection of the eye, which occurs in all these cases; and we will pause upon it. Why should there be a projection of the eye? The act of respiration, as you contemplate it, belongs to the higher animals. The function of decarbonization may be performed in different ways. In animals which breathe by means of a thorax, it is by the dilatation of the lungs. In man, other functions are superadded to it, or rather performed through the means of it: such as the act of smelling, coughing, sneezing; actions which become necessary, from the very complication of the tubes through which the air must be drawn. You naturally ask, what has the eye to do with respiration? Suppose that you are coughing or sneezing—suppose that you are exerting yourselves with great power, or doing any thing which shall produce an impulse of blood to the eye, as in vomiting—the eye will suffer, unless it be protected; and nature is solicitous to protect it. How does she do it? By extending the respiratory nerves to the muscles of the eyelids, giving them an action synchronous, or corresponding exactly with the act of respiration. If, for example, you sneeze or cough violently, you know that you have sparks of fire before the eye. Now it has been imagined that these sparks arose from blood being driven into the retina. No such thing; it is the corresponding action of the muscles of the eye with the act of sneezing; for it is intended by nature, that the moment you produce an impulse of blood towards the eye, the eyelids should become firm and tense over the organ, so as to prevent the blood passing into the eye to the injury of its delicate parts. The experiment is exceedingly simple by which this is proved. If, in the dark, you open the eyelids with your fingers at the moment that you sneeze, there is no spark of fire; the spark arises from the sudden action of these muscles at the very moment that the impulse takes place within; the compression affects the retina just as when you pat upon the eyeball with the finger. In this woman the eye projects because these muscles of the eyelids have lost their tone—have lost that property which they have received from the portio-dura. The eye-ball, in its natural condition, is held suspended, and duly supported, between the muscles of the eyelids and the muscles in the orbit: the former failing in their proportion of action, there is a fulness perceptible from a certain protrusion of the eye-ball.

Now the portio dura is the respiratory nerve of the face—that nerve by which there is a combination of action, not only between the features, but between the face and other parts which are associated in respiration; whether that be simple breathing or the employment of the act of breathing in speaking, smelling, sucking, swallowing, coughing, sneezing, or expression. Many of you have, unfortunately, the opportunity here of observing a person dying. If you have watched the sad scene, you must have noticed that the sense is departing—that the power of motion is going—that sensibility and voluntary motion are at last quite lost; but that the patient respires violently, and at the same time that the chest is heaved up with great power, the muscles of the neck are drawn convulsively, the nostrils are expanded, and the cheeks and lips twitched. Thus there is an action going on, through the influence of this class of nerves, after sense and motion are dead: it is the last system, or they are the last parts to die. Even at length, when the breath is drawn irregularly and at long intervals, and when it finally stops, the last act of life is a twitching of the cheek—a twitching of the neck and of the lips. The last motion

that you see in the almost dead body, is the action through this nerve.

I remember very well, many years ago, when these ideas on the nervous system first occurred to me, that I took the opportunity of explaining them to a great philosopher (Dr. Young), who was respected as a man of almost universal information and great intelligence. I took to him the class drawings from which these are copies. Capt. Kater, who was present, was very desirous to understand the whole doctrine. I began by saying, "The respiratory nerves of the face." Dr. Young was in bad health, and irritable. He said, "Who ever heard of respiration of the face?—that will never do." He would not hear of the idea of respiration of the face. No wonder; as a chemical philosopher, he had only been accustomed to think of respiration as connected with the great function of the oxygenation of the blood. It was a new idea to him to think of the act of respiration as connected with the face; so that I had to explain to him, that if the chest acted by itself, the whole of the tubes by which the air entered would be collapsed—drawn together; that it was necessary that the velum and pharynx, and the chink of the glottis and the nostrils, should be expanded in proportion as the air was drawn in. I said, unless these nerves go to the nostrils, to the pharynx, and to the larynx, you could not breathe; because there would be no expansion of these tubes, by which the air is drawn in, proportionably to the motion of the thorax. You will understand what I mean: that it is necessary to the inflation of the lungs that all the tubes leading to the lungs should suffer a dilatation, or at least be so stiffened by the action of their muscles as not to collapse. In many cases similar to that which I have read to you, when I have made the person close the mouth and draw in the breath by the nostrils, the nostril on the affected side has collapsed; and were this universal to all the openings, and more especially to the glottis, you can easily conceive that the patient would be suffocated. That is what I mean by saying that the act of respiration belongs to the lips and nostrils, to the throat, to the larynx and pharynx, as well as to the lungs; that there is a respiratory nerve to the face. I remember another instance, and a very curious one, too, as marking the necessary extent of the combination of parts in respiration. A young gentleman went up to the College of Surgeons in order to pass. He was examined by my excellent friend, Mr. Abernethy; who was then in all his vigour of mind, but who was ever a little sarcastic. He asked this young man to tell him the parts that combined in the act of breathing; and when he had enumerated the common parts, he added, "the muscles of the perineum." At which Mr. Abernethy sneered, and repeated, "Perineum! what has that to do with it?" My young friend proceeded to explain, that although, in the common act of respiration, the muscles there were not concerned, yet that in all violent excitements of respiration, such as in coughing, sneezing, and straining, he had been taught (and, he believed, correctly) that unless there were a combined action there, the parts would be protruded; that unless the muscular parts at the opening of the pelvis were in correspondence with the diaphragm, there could be no protection of the viscera, but a protrusion of it. He added, "I am sensible there is a corresponding action every time I cough or sneeze." My young friend was correct; and here is another instance shewing us that nature is kind and careful in binding the parts together through the nerves, so that every part is supported and protected. However, you may learn from this that it is dangerous to give a new idea to an old gentleman—even to one who, in his earlier life, was foremost in the pursuit of novelty—and that it is better to keep to old theories when you go to the College of Surgeons.

To return to the case before us, it is stated that the sense of smelling is perfect. Now there is a relation here, and a very curious one. The act of smelling is not simply the exposure of the odoriferous particles floating in the atmosphere to the olfactory nerve; but they must rush with a certain violence over it. There is a sort of double or internal nostril; and a change is produced in the figure of the passage when you breathe simply and when you smell. This configuration of the tube is that which, in the act of taking snuff, gives force to the stream of air upwards. If a man were putting his nose to his snuff-box, and simply breathing, you know what would be the effect—all the snuff would go into the throat; but when he snuffs with the nostril it goes upwards, stimulates the higher part of the schneiderian membrane, and does not go backwards. Thus you see the difference between drawing the air in, in the act of smelling, and the act of breathing. Now this depends upon the action of the muscles of the nostril, and the action of the muscles of the nostril depends upon the portio dura; so that there is a sort of imperfection in the act of smelling, consequent upon the loss of influence through the portio dura, which, but for this explanation, you might conceive had some relation directly to the organ of sense. No; it is only the play of the outward

apparatus of sense which is deranged: that is the meaning, I presume, of this observation,—"the sense of smelling is perfect." In many cases, where this nerve is ascertained to be deficient, the sense of smelling is not perfect.

The next remark is, that there is no deafness. The first case to which I adverted in proof of the correctness of my opinions, was that of a man who had suppuration before the ear, involving a part of the nerve; and he had paralysis only of the forehead and of the eye-lids. The next set of cases arose from suppuration in the ear and disease of the temporal bone, which you are aware affects the nerve in its very body, previously to its coming out before the ear, and therefore such a cause produces paralysis of the whole face, and deafness. As there is no deafness in this case, and no indication that the root of the nerve is affected in the brain, we may hope that it is a superficial disease of the nerve, or an inflamed gland pressing on it in its course, which causes the symptoms. It is further said, "the muscles of mastication act equally well on both sides;" and this is a very remarkable thing. In some of these cases the muscles of the forehead are wasted, so that there is only a smooth skin over the skull. In old cases of this kind the muscles of the face waste away, and diminish; the integuments are like a piece of parchment drawn over the skull; and the remarkable thing is, that whilst the muscles of the features are thus obviously defective, and absorbed from the want of motion and the want of excitement, the masseter and temporal muscles, which close the jaw, remain entire; because, as I stated, the fifth pair is not only the nerve of sensibility to the head and to the tongue — not only the gustatory nerve — but has branches which go to the muscles, and those muscles are connected with the act of mastication. All those muscles which either act by sympathy with other parts in respiration, or which are employed under the will in the act of respiration, whether in feeding, drinking, speaking, or in laughing, waste with the injury of the portio dura. The deeper-seated muscles, which are supplied by the fifth, do not decay.

But I am proceeding too far. There are some other cases, diseases of the fifth pair, which are beautiful illustrations of the distinctions of the two systems of nerves. I am sure you must have already observed that these are the very parts which it is important for you to study, because they are necessary to the explanation of the symptoms of many diseases; and perhaps that is the reason why they are more noticed than other parts of the nervous system, which can only be properly pursued by real anatomists, who are thoroughly acquainted with the dissection of the parts, and the complicated functions performed by them, and have time to study the pathology deeply.

OBSERVATIONS ON THE

CROWING INSPIRATION OF CHILDREN,

And its Connexion with a Morbid Condition of the Thoracic or Cervical Absorbent Glands.

By Hugh Ley, M.D.

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That very "peculiar species of convulsion in infant children," to which the attention of the profession was first particularly drawn by the late Dr. John Clarke, has, since his time, become so generally known, as to have occasioned the familiar appellation, by which such cases are now readily recognized and briefly described, of "crowing children." This distressing malady is obviously a constriction of the glottis, which impedes, and occasionally suspends entirely, the respiratory function. The child has an interruption more or less complete of its breathing; — it makes violent struggles, and at length recovers its breath with a shrill, sonorous inspiration, — some say, like the crowing of a cock; at all events, closely resembling that sound, which is so characteristic of croup and hooping-cough, and which no one conversant with such matters, who have once heard it, can hesitate to refer to an imperfect opening of the rima glottidis.

These attacks, always formidable in appearance, and occasionally alarming, because fatal, in reality was believed by Dr. Clarke to be intimately associated, as a cause, concomitant, or consequence, with more or less of cerebral excitement or pressure, and the deservedly high estimation in which his authority has been long held, has sufficed to ensure the almost universal adoption of his opinion and his practice. His opinion, however, is far too exclusive to justify its admission without more satisfactory evidence, and more conclusive reason-

ing, than has hitherto been adduced in its support; and his practice founded upon it, although not sanctioned by him to the fearful extent to which it has been since carried by his enthusiastic, but less discriminating, admirers and followers, is of too violent and weakening a character to be employed, excepting in cases of paramount urgency.

Hence the truth of Dr. Clarke's doctrine, and the propriety of his treatment, have been occasionally combatted; and by none, perhaps, so successfully as by my very intelligent friend, Mr. North, whose observations, strongly corroborative of those of Capuron, Underwood, and others, incontestibly prove, that although there may be in some instances a connexion between this "crowing" disease and vascular turgescence or irritation within the cranium, yet that, in the majority of instances, there is no evidence of such a pathological state of the brain, its vessels, or its membranes; and that the idea appears altogether inconsistent with the comparatively inert measures to which this "crowing" so frequently yields.

Amongst other causes, to which it is not necessary for me to advert, a morbid condition of the thoracic absorbent glands will occasionally produce this sonorous inspiration. For the first intimation of such connexion I am bound to acknowledge my obligation to my estimable friend and former colleague, Dr. Merriman, who has very briefly adverted to it in a foot-note to his edition of Underwood on the Diseases of Children. Having established the identity of the severe form of inward fits alluded to in that work with "the peculiar species of convulsion" described by Dr. Clarke, Dr. Merriman says, "In two cases of the kind, which were under my care nearly at the same time, the children died in the fits. They were both opened by Mr. Sweatman, a very skilful anatomist, but not the slightest appearance of cerebral affection could be discovered in either of them. The principal deranged structure discovered was a collection of small glandular swellings in the neck, pressing upon the par vagum." But the description thus given of the seat of the diseased structure in these cases is somewhat imperfect. The principal clusters of enlarged glands were those described by Cruikshank, as "constantly found at the root of the lungs both before and behind the bifurcation of the trachea in the two bronchia, and frequently blending with others which lie upon the arch of the aorta, not unfrequently between the origins of the carotids." An inspection of the preparations taken from these cases, now in my possession, conclusively establishes, that these were the glands principally affected; and that, although the trunk itself of the par vagum might not altogether have escaped, yet the recurrent nerves were principally subjected to the injurious impression. In one of the preparations, the left recurrent, as it turns round the arch of the aorta, is raised more than half an inch from its ordinary relative position;—it is flattened by forcible elongation, and its texture is altered. It appears withered. A similar influence, in less degree, appears to have been exerted upon the recurrent in the other case; and in both preparations the same nerve in its course upwards, is within the range of and may have been subject to injurious effects from enlarged lymphatic glands in the neck.

I have reason to believe that this connexion is more common than could well have been supposed, seeing that it has almost entirely escaped the notice of the practical pathologist. Since my attention has been drawn more particularly to these cases of "crowing," I have seen several fatal instances, in which, from the symptoms, I had anticipated the existence of such a change of structure, and in which, after death, such structural disease was detected. I shall select two of these;—one, in which no other morbid change in any part of the body could be found;—the other connected with extensive disease within the chest, but modifying the symptoms, so as to disguise its nature.

The first of these was a child in whose welfare I took the greater interest, that the mother, of most delicate constitution and pink and white complexion, was a friend as well as patient. This child was pallid and pasty, fat and flabby, but without any external glandular disease.

About the time when the first teeth were beginning to shoot, without other symptoms of catarrh or suspicion of such exposure as was likely to produce it, this child became subject to a "wheezing," as the mother termed it, apparently from mucus in the trachea, which could be readily heard from one

end of a large room to another. The tone of this mucous rattle was peculiarly "gruff;" much deeper in fact than could be expected from the size of the trachea in a child of that age. This was at first unaccompanied with other affection of the respiratory function than occasional hurried breathing, when the trachea appeared fuller than usual; and there were no symptoms of fever. In this way the child would "wheeze" for hours in the day with little cough or dyspnœa; and it continued as lively and playful as before.

After this had lasted for some days, the sound of mucus would occasionally lose its continuous character, returning at intervals sometimes of hours, at other times of days, with comparative freedom in the intervals. This subsidence of the symptoms had no such decided connexion with changes of weather, alteration of diet, or the effect of medicinal agents, as to justify my referring it to either of these causes.

As this "wheezing" was supposed to be connected with teething, some time elapsed before I was consulted upon an occasion, when it being excessive, but still without distress, the fears of the relatives were alarmed. Then assuming the possibility of some inflammatory affection of the bronchi, although there was no other evidence of it than the sound, as if of mucus, in the air-passages, I thought it right not to omit leeches, stimulant applications, including a blister externally, mercurial and other purgatives, and such expectorants as are taken from the tribe of emetics, especially ipecacuanha. But I derived so little advantage from them, that I at length desisted from their employment, for they seemed only to produce general weakness without any corresponding benefit to the disease. Even lancing the gums deeply, for the teeth were not near, afforded scarcely temporary relief. The child was then taken into the country, from which, upon the whole, more advantage was derived than from any other remedies.

Some weeks after this the child having returned from the country, it had a recurrence of its "wheezing," with attacks of cough, violent in character, coming in fits, and occasionally followed by a disposition to retch, which dislodged from the trachea a portion of phlegm, although it did not always expel it from the mouth. At length upon one occasion I was called to this child in a great hurry, because it had awakened suddenly from its sleep in what was termed "a fit." This "fit" had ceased upon my arrival at the house, but there was none of that heaviness of countenance, with drowsiness and somnolency, which commonly succeed to convulsions from head affection. I could not learn upon inquiry, that there had been any violent alternate contractions of antagonist muscles, any convulsive agitations, in fact any "clonic" spasms of the trunk or extremities. The child was described to have been breathless for a while, pale rather than florid or "purple," with all its muscles rigid, its extremities extended, its hands clenched, the spine bent considerably backwards, the eyes staring and starting, frequently rolled upwards, and the countenance expressive of agony. At last, after an evident and severe struggle, the child recovered its breath with a shrill, sonorous inspiration, like that of croup or hooping-cough. One consultation was now held with a very eminent physician, who so strongly urged bleeding by leeches, and reiterated large doses of calomel, in consequence of his suspicion of head affection, that with the uncertainty upon my mind as to the essence of the disease, it would have been absurd to resist his proposal. These remedies were, therefore, tried not only without advantage, but with manifest injury. The crowing became more frequent, the fits of breathlessness equally severe, and the cough with or without hooping, and with or without retching, similar in character as well as extent. And now finding that the symptoms were at least as violent as before, while the strength was obviously declining, I was induced to try such remedies as might tranquillize the cough, and at the same time uphold the constitutional powers. To fulfil these objects I directed the hop, sometimes hemlock or henbane in combination with mineral acids, taking care to prevent accumulation in the bowels by moderate aperients; using embrocations which combined stimulant and sedative properties; and allowing a more generous diet.

Under this treatment, begun in London, and continued in the higher and more healthy division of Essex, the child appeared for a while to be benefitted. It was, however, observed that slight causes, perhaps the advance of the

teeth, but certainly a continuance for days of damp weather, combined with cold, would aggravate or bring back the symptoms. Some relatives, who now heard the cough, were so convinced that it was hooping-cough, from their familiarity with that disease in their own families, that I was entreated and persuaded by them to allow the child to take the half popular, half professional combination of salt of tartar and cochineal. In spite, however, of this all-powerful remedy, the cough, the wheezing, the crowings continued, and the child was now rarely, if ever, free from some distress in its breathing. This becoming more alarming, the child was brought to London, that it might be principally under my care. It was now so reduced in strength, though it might still be said to be fat but flabby, that I once more urged a consultation, and now I had the pleasure of conferring with Dr. Merriman.

We were both apprehensive about the state of the lungs, and both considered the child in most imminent hazard, not only on that account, but from irregular fever, assuming the character of hectic, and an unmanageable diarrhœa, which might be termed colliquative. I had, however, also strong suspicions, which I had frequently stated to the friends, that the glands at the back of the chest were enlarged.

It was further agreed, that in a case so severe, yet presenting some obscurity, little more could be done than to support the system, to quiet the cough, and to restrain the purging. The remedies suggested for these purposes I need not particularize, as they were ineffective. The child, after occasional attacks of breathlessness, of crowing, and of violent cough, having made vehement, but ineffectual struggles to recover its breath, fell upon its side in its nurse's arms, and died.

The relatives, to whom some kind friends had persisted throughout in insinuating, that this little patient had water upon the brain, were as anxious as myself that the body should be opened. I had from the earliest period up to the last moment assured them, that there was not the slightest evidence of such disease, and I was desirous therefore that the body should be examined by some one expert in such examinations, and in the use of the knife. I took, therefore, with me my colleague, Mr. Arnott, for the purpose.

All the viscera were healthy. There was no trace of arachnitis, or vascular congestion, or water within the cranium: the abdominal cavity was free from disease, if we except very slight enlargement of some of the mesenteric glands; and the lungs were perfectly healthy, spongy, and crepitous. Upon inspecting the bronchial glands, to which, mentioning my expectations to Mr. Arnott, I directed his peculiar attention, my anticipations were fully realized. The cluster of glands at the root of the lungs, and about the arch of the aorta, were greatly diseased; one of them, as large as a moderate-sized chesnut, being full of the curdled, half puriform matter so characteristic of strumous inflammation; another smaller one having also imperfectly suppurated.

Soon after this case had occurred to me, the child of a late banker was placed under my care. It had occasional fits of breathlessness, threatening suffocation, from which it recovered with a crowing inspiration. He suffered also from occasional fits of coughing, differing from hooping-cough in nothing but the symptoms between the paroxysms, and the absence of vomiting or retching at its conclusion. This boy had always been delicate, but the parents dated the accession of his present disease from the occurrence, about twelve months previously, of measles and hooping-cough together, or in very rapid succession. From these he never completely recovered, but was left much weakened and extenuated, and was subject to great increase of cough, from which he was never afterwards quite free, upon the slightest exposure to cold, or even from moderate exertion. He had now a permanently rapid pulse, with proportionately hurried respiration, and occasionally some degree of irregular fever, with circumscribed flush upon the cheek. The cough was unaccompanied with expectoration, and had been so throughout the whole progress of the complaint; though sometimes a mucous rattle was observed before a paroxysm of cough, which occurring more particularly at night than in the day, was ascribed to the horizontal posture.

Having stated to the friends my apprehensions that there was some disease of the lungs—although I had then no

idea of its extent—combined, probably, with enlargement of glands at the back of the chest, and that upon the whole my fears much predominated over my hopes, they readily consented to a consultation, and they named one, who had been accustomed to attend the family, who was deservedly at the head of his branch of the profession, and pre-eminent for the rapidity and general accuracy of his decision. Whilst we were together in the room, the patient had one of his paroxysms of cough, when the physician with whom I was consulting, at once convinced of the nature of the malady, said immediately upon our return, "If ever I heard hooping-cough, that child has it." His view of the complaint was therefore more favourable than my own. But with his usual delicacy to his professional brethren, and in his anxiety not to compromise my character for discrimination upon the one hand, or his own opinion upon the other, he stated to the friends that the disease under which their child laboured was a "spasmodic cough," likely to be of considerable duration, recovery from which depended upon the child's powers to struggle with a lingering disease, with, however, considerable chances in its favour; and requiring light, but nutritive diet. But whatsoever our difference of opinion as to the nature of the complaint, we cordially agreed upon the more important point, the remedies to be employed, which consisted principally of the infusion of roses with a mineral acid and conium, mild aperients, and the application of local irritants to the surface of the chest.

The gloomy anticipations which I had formed were speedily realized; for, within a fortnight of this period, the boy sunk under his disease. Upon examining his chest, we found the lungs honeycombed throughout their whole extent with vomicæ; varying in size, from that of a pea up to that of a horse-bean, or something larger: but no one of them having any distinguishable connexion with the bronchi. There was also very considerable enlargement of the glands at the root of the lungs; to which I was disposed to refer (as, from the symptoms, I had expected to find such morbid structure) the rattle of mucus in the trachea, the occasional brief suspension of the respiratory function, the crowing inspiration, and the violent spasmodic character of his cough, especially in the night: symptoms which are highly characteristic of such a pathological condition of the glands in the chest, but very uncommon in phthisis.

I have seen other cases of occasional breathlessness, threatening suffocation, in which I had suspicion (or even, in some instances, complete belief) of the existence of a similar structural disease: but the evidence is necessarily imperfect, as the children have recovered. They had the crowing inspiration, sometimes preceded by breathlessness, sometimes spasmodic cough; they had no symptom of vascular congestion or excitement within the cranium; there was no cognizable irri ation from teething; the stomach and bowels did their office moderately well, and they were either the children of parents in one or both of whom a strumous disposition might be more than suspected, or obviously of a strumous habit themselves; and they have all been more benefitted by change of air than any other remedies. One of these is sister to the child whose case I just detailed, and very like the brother in constitution and complexion. This child has been under my care more than once in London, and one consultation has been held with an eminent physician upon her case. I have also occasionally been consulted about her from the country, by letter, on account of symptoms analogous to, nay, identical with, those which ushered in the disease in her brother. She has had the wheezing, the crowing inspiration, and the spasmodic cough. Hitherto, however, there has been no fit of breathlessness—the disease has been kept under control by constant residence in the country; her time having been divided between the higher parts of Essex, Bedfordshire, and Hampshire.

But it is unnecessary to multiply instances: enough, I apprehend, has been advanced to prove conclusively that the "peculiar species of convulsion in infant children," described by the late Dr. John Clarke, may arise without cerebral excitement or pressure; and that, amongst other causes, enlargement of the absorbent glands, both before and behind the bifurcation of the trachea, "blending" with others which lie upon the arch of the aorta, and "not unfrequently between the origins of the carotids," may, and does much more frequently than is commonly suspected, produce it.

It was at one time my impression,

that no enlargement of glands in any other situation would produce similar results. Where, therefore, I found the crowing inspiration, without other assignable cause—more especially if combined with the sound of mucus, the breathlessness, or the spasmodic cough, for these are just part and parcel of the same morbid condition—I was disposed to infer the existence of such disease. Subsequent observation has convinced me of an error which analogical reasoning first led me to suspect. Examining minutely the preparations in my possession, as well as the enlarged glands in the fatal cases which I have detailed, it was obvious that the air-tubes had undergone no perceptible change; the trachea retained its shape and size, and the extremities of the bronchi, where they are cut through as they pierced the glandular mass, had still their rounded form and ordinary size. The symptoms, therefore, could not be referrible to mechanical obstruction: besides, the effect was produced not upon the bronchi, but upon a mere fraction of the larynx at a distance from the diseased mass — the rima glottidis. This could only be effected by nervous communication; and the mystery is completely solved when it is borne in mind that these glands are enlarged just where the recurrent nerves turn round in their ascent, to influence the movement of this all-important chink; and that in one of the preparations, that nerve has been subjected to very forcible elongation, to great change from elevation of its relative situation, and even to considerable change of texture. From this, it was impossible not to infer that the phenomena were the result of some effect upon these recurrent nerves, produced by the enlarged and indurated glands in the vicinity; and if so, it was by no means irrational to expect that if a similar impression were produced upon these nerves in their course upwards, to their ultimate destination, the muscles upon which the movements of the arytenoid cartilages depend, similar symptoms would be produced. This view of the subject opened a new and important field of investigation, both speculative and practical; and the interest which it has excited would have amply repaid me for the devotion of considerable time to the inquiry, even if the practical conclusions were unimportant. The more speculative parts of this subject I shall reserve for a future occasion, as they are not essential to my present purpose, which is to direct the attention of the profession to certain pathological relations of two chains or clusters of absorbent glands, which have hitherto only been considered as abstract points of mere descriptive anatomy, or with reference to the lymphatic system, of which they constitute a part; but altogether unconnected with the very important textures and organs with which they are in close contiguity.

It is well known that there is a chain of glands lying directly in the course of that important sheath in the neck, which contains the internal jugular vein, the carotid artery, and the par vagum, and close also to the trachea; "utriusque lateris cum aspera arteria continuatur *." It is, moreover, well known, that these glands "frequently enlarge and inflame from scrofula alone;" but they may be enlarged also, as Cruikshank has well said, "not only from particular affections of the mouth, and of the integuments on the outside of the head, but from affections of the brain and its coverings †." If, therefore, in cases where the bronchial glands were enlarged, the crowing inspiration could be fairly ascribed to their effect upon the recurrent nerve at its origin, it was not irrational to conclude that similar enlargement of lymphatic glands in the neck, contiguous, as they are, to the par vagum, and the recurrent in their course, would be attended with similar results; and such in reality is the case. My experience has supplied me with numerous instances of this kind; and within the last six weeks, not less than five such cases have presented themselves to my notice. The glands were enlarged from the very causes enumerated by Cruikshank; and the crowing inspiration, with the other symptoms so characteristic of this affection of the nerve,—occurring with such enlargement of these glands, increasing with their growth, and subsiding or disappearing with their decrease or disappearance,—abundantly establish the nature and frequency of the connexion.

A. W., æt. four, residing in my neighbourhood, rickety, scrofulous, and the child of unhealthy parents, has been subject for some time to severe cough, commonly accompanied with that kind

* Haller. † Cruikshank.

of noise which "an increased secretion of mucus in the air passages would produce *;" but without fever, or any other symptoms of catarrh. The parents represent these attacks to come on principally — indeed exclusively — in the night. Sometimes the child is breathless, and threatened with suffocation; at other times, or succeeding to this state, amounting to temporary asphyxia, it has a violent cough, resembling hooping-cough; both being attended or followed by a sonorous inspiration, like that produced when recovering from the feeling of strangulation, which attends a fragment of a solid body, or a drop of a stimulant fluid getting into the larynx from the mouth; or like the crowing inspiration of pertussis, or croup.

By day this child is apparently quite well, cheerful, and playful, without cough or distress of breathing. Its appetite is good, but the bowels torpid; and when suspended by the arm-pits and chest, with the abdomen exposed, the belly is obviously tumid and tense, especially above, and to the left of the umbilicus. At night the child readily falls asleep, when taken to its bed; but at the end of from four to six hours, the sound of mucus in the trachea is observed; and this the mother well knows is but the precursor of an attack of either breathlessness threathening suffocation, or of cough. Soon after this she awakens suddenly, looking ghastly, to appearance half strangled; the eyes staring; the features distorted with, and expressive of agony; the body bent rigidly backwards; the limbs extended, and the hands clenched. This at length is succeeded by a crowing inspiration, and attended, or immediately followed, by violent cough, coming in fits, with "*crowing*" in the intervals, like what the husband had observed in a disease, of which he saw his youngest sister die, and which he was told was croup. The cough often lasts for half or three quarters of an hour, when the child, exhausted, falls upon its pillow, and sleeps soundly for four or six hours, again to be subjected to the same series of symptoms; and such is the vehemence of this cough, that the fears of the parents have been twofold: they thought that either "*a blood-vessel must burst*," or that "*the child must die of suffocation.*"

Some thought this disease must be hooping-cough; which, however, several reasons led me to disbelieve. 1st. Although the mother anticipated a paroxysm when she heard the sound of mucus in the trachea, yet the child had no foreknowledge of its approach, and did not therefore struggle against it, or seize, as in pertussis, the first person or object within its reach for support. 2dly. It often began with a complete suspension of the respiratory function, during which there was an obvious and vehement struggle to recover its breath, which is at least not common in hooping-cough. 3dly. The cough was rarely attended with disposition to retch at the conclusion of the fit. 4thly. The paroxysms never came on in the day, when sporting with other children, but always after it had slept tranquilly for some hours. 5thly. It had not been in the way, as far as the friends knew, of catching that disease; and, lastly, there were several children in the same house who had never had hooping-cough, who were in constant intercourse with this child, their playmate, and who yet, after an interval of some weeks, have shewn no symptoms of that disease. My attention, therefore, was directed to the glands of the neck, which I now well knew might produce those symptoms. I found these, from the angle of the jaw to the sternum, and in a direction parallel with the clavicle, much enlarged and sensibly indurated. They could even be seen when the child's neck was bent backwards, and I directed the husband, a man-servant, with whom I was in daily communication, to examine them, that he might be able to judge and report to me of any relative increase or diminution of size.

The means which I directed were simple. They consisted of gentle alterative aperients, and the infusion of roses as the vehicle of a mineral acid, and tincture of hop—in other words, mild tonics, combining at the same time a moderately sedative influence; and this with a generous, but not very stimulant, diet.

Within a week the cough had sensibly diminished—the child had one fit only in the night, instead of two; it had been of shorter duration, as well as less severe; the attacks of breathlessness had nearly ceased, and the crowing was less marked; and the glands were evidently diminished in size. In another

* North.

week the cough had become slight, and caused no longer anxiety: and now the glands, which had been as large as small marbles, were reduced below the size of peas. A few days after this, the child, at my suggestion, was sent to winter at Clifton. The mother, who accompanied her, returned at the end of a fortnight, and called, with great thankfulness, to tell me that she had left her child perfectly free from cough or any other affection of its breath, in high spirits, joining other children in their sports, bearing well and with temper the confinement of a day-school, and with "*the lumps*" *scarcely perceptible to the touch—not at all to the sight.* The belly also had regained its natural size. This report much gratified me, a younger brother having recently died from what were termed fits. Some had therefore expressed their fears that this child might have, or be threatened with, water upon the brain: but the symptoms coming on, in this case, with the enlargement of the glands, subsiding as they decreased in size, and ceasing with their disappearance, it is impossible not to refer the symptoms to that pathological condition.

I incline to the opinion that, in this case, the glands were enlarged in a child prone to such disease from exposure to cold and damp in a kitchen, occupied by its parents for a mangle; in which the child was playing much of the day, and to which the staircase led directly from the street-door: this, therefore, in a house occupied by several families, was perpetually going, and consequently fanning the inhabitants of these lower regions with the no very salubrious air of a confined street leading from Shepherd's Market.

[To be continued.]

STRANGULATED HERNIA—

OPERATION NOT SUBMITTED TO—DEATH—STRICTURE FORMED BY NECK OF SAC.

To the Editor of the Medical Gazette.

SIR,

I HEREWITH send you the particulars of a case of strangulated hernia, which occurred lately to my notice, and which I consider interesting not merely in consequence of its importance in a surgical point of view, but because it bears most materially upon the question, lately particularly brought before the public by Mr. Key, of the propriety of dividing the stricture without opening into the hernial sac. I am perfectly convinced that this method of operating is in many instances advisable, as I have myself witnessed the successful result of cases treated in this manner; but I apprehend the correct method of coming to any satisfactory decision on a question so important in its nature, is to expose to the profession as many cases as possible which militate either for or against a practice so strongly recommended, and which is at variance with the common method of procedure.

Jan. 23d.—An old man, æt. 65, was brought into the London Hospital labouring under the symptoms of a strangulated hernia. He had been sent in by a neighbouring surgeon, who had advised him to come to the hospital four days ago, as the symptoms of strangulation were very apparent at that time. He stated that he had been the subject of rupture for upwards of twenty years, but that he had always been enabled to return it until Sunday last, Jan. 19th, when it came down suddenly. He was presently seized with vomiting, which continued on that day, and he had an alvine evacuation. A surgeon being sent for applied the usual means, but was unable to reduce the hernia. He left him under the impression that he was to go immediately to the hospital. When I first saw him, which was on the evening of the 23d, the symptoms of strangulation were most decisive. He had been constantly vomiting since Sunday, and had had no further evacuation since that time. His pulse was exceedingly low, and his countenance much distressed. I found an inguinal hernia on the left side, about the size of two fists: it had descended into the scrotum, and was a little hour-glassed in its shape. The scrotum was rather black from extravasation at the lower part. The tumor was very tender; and the abdomen was distended with flatus. The fluid vomited was of a stercoraceous odour.

The house-pupils had previously placed him in a warm bath, and had used the taxis. As the man was much exhausted, I made but slight efforts to

return the intestine; but being unsuccessful, I immediately recommended the operation. To this the old man would not in the least listen, saying that "he knew hospitals were merely places for cutting patients about." However, I could not persuade him, and I therefore considered myself now justified in re-applying the taxis, which I did with as much force as I deemed prudent: no effect was made upon the swelling by these means; the man was, therefore, left. A fomentation was ordered to be applied to the abdomen, and he took 40 drops of laudanum.

On the next day he was in all respects much worse; and he died early on the morning of the 25th.

Post-mortem, 12 hours after death.—The integuments and other coverings of the hernial sac were carefully dissected off, and shewed very well the successive layers of fascia, &c. which are found covering a hernia of this description. The sac was opened at the lower part, and some bloody fluid escaped. The contents of the sac consisted of omentum and a fold of small intestine. The omentum was placed above the intestine, was much congested and thickened, and adhered firmly to the neck and the lower part of the sac. The intestine, about eight inches in length, was situated beneath, was exceedingly black, but had not lost its brilliancy, except in some situations where recent fibrinous adhesions had taken place.

A finger passed into the neck of the sac gave the sensation as if the stricture, which was remarkably tight, was formed by the upper column of the external abdominal ring, and this could be easily seen crossing, and apparently tying down the neck on the outside; I therefore passed a small probe-pointed bistoury beneath, on the outside of the sac, and divided it. However, considerable efforts could not succeed in returning the intestine notwithstanding this division, and the peritoneal covering gave way in the attempt. On further examination it was found that the impediment arose from the contraction of the neck of the sac, which appeared as if a delicate thread had in this situation been tied round it. On the division of this, the intestine was reduced with perfect ease. The peritoneal covering of the intestines generally was in a state of inflammation, and they were distended with flatus.

The omentum, in this case, had evidently been irreducible for some time, as the adhesions were certainly not of recent date.—I am, sir,

Your obedient servant,

JOHN ADAMS.

81, Mark-Lane,
Feb. 1, 1834.

UTERINE HÆMORRHAGE—DELIVERY OF HYDATIDS.

To the Editor of the Medical Gazette.

SIR,

HAVING observed that your pages are always open to whatever is likely to prove interesting to the profession, I transmit to you the hasty sketch of a case which lately occurred to me,—with the hope that it may appear deserving a place in your valuable journal.

I am, sir,

Your obedient servant,

HENRY WELLS REYNOLDS.

Thame, Jan. 27, 1834.

Sarah S., a pauper patient of one of the neighbouring villages, applied to me. She is a married woman, about eight and twenty years of age; has had two children previously; is remarkably strong and healthy in appearance. She states that she supposes herself six months advanced in pregnancy, and that for two or three weeks she has been inconvenienced by a trifling uterine discharge, unattended with pain. Medicines were given to her, and strict quiet enjoined. Three weeks elapsed without any material change, when one evening a messenger came requesting I would see her immediately, as she was *flooding to death*. On my arrival I found matters "*in extremis:*" lips pale, cold extremities, &c.; slight labour pains, returning at irregular intervals, with increased hæmorrhage. The os uteri was considerably dilated. Upon examination I found, as I previously feared might be the case, the placenta attached to it, consequently there was nothing to be done, but to deliver her as soon as possible. With some difficulty, increased by the obstinacy of the patient, I effected the introduction of my hand, ruptured the membranes, which were perfect, and found, to my infinite sur-

prise, thousands of inhabitants—but no child—hydatids of every size, from a good sized plum to a grain of millet seed, connected by a sort of transparent tissue. I immediately endeavoured to empty the uterus, but found I could do so but partially, in consequence of the placenta still adhering in part. I passed my finger gently round the adhesion; but from its tenderness, unfortunately in so doing I ruptured it. I say unfortunately, because I could have wished to have preserved it entire. Having succeeded in extracting it, the uterus immediately expelled the remainder of its contents, and the hæmorrhage ceased. The lochia took place, as in natural labour, and the woman slowly recovered her strength. The quantity of hydatids I was enabled afterwards to collect amounted to considerably more than would fill a large chamber vase. Upon examination, the body which I call, and which resembled the placenta, on its exterior surfaces had the same morbid appearances and tenderness of touch you meet with when the fœtus has died *in utero*. It was hydatidal throughout; and a small string, about three inches in length on its fœtal surface, simulated the funis, but apparently with no corresponding *point d'appui*. There was little or no fluid contained in the membranes, except in the hydatids themselves. The hæmorrhage, which was excessive, ceased upon the rupture of the adhesions of this apparent placental body, and the uterus contracted freely.

ON THE

STRUCTURE OF THE COVERING OF THE CORNEA.

(In a Letter from W. C. Wallace, Esq., *New York, to* W. Mackenzie, M.D., *Glasgow.)*

Hudson-Street, New York,
22d Nov. 1833.

My dear Sir,

* * * * *

It is stated that the conjunctiva lines the eye-lids, and is reflected over the eye-ball; and that it is a membrane between the mucous and the cutaneous structure, as it partakes of the diseases of both.

When the eye of an ox is immersed in hot water or vinegar, the anterior membrane coagulates, and may be separated from the cornea, and from that portion of the conjunctiva which it covers. The conjunctiva does not coagulate, neither can it be traced to the cornea, but seems inserted into the sclerotica. When the eye is macerated, and the conjunctiva dissected from the eye-ball, the conjunctiva may be cut through at its attachment, and as the anterior membrane overlaps it, there may be the appearance of a continuity of structure; but if the separation be commenced on the cornea, and be carried to the conjunctiva, the corneal covering will be found to overlap it for a short space, and to be a distinct membrane, as it can be completely separated from it. It may be compared to a small watch-glass, very thin at the edges, a little larger than the cornea, and placed over it and the contiguous conjunctiva. This is not a mucous membrane. It resembles the cuticle, in being composed of albumen, and in being easily regenerated when abraded.

Were the anterior membrane a continuation of the conjunctiva, the chemosis in severe catarrhal ophthalmia would not stop at the edge of the cornea, but would proceed over its surface. Were it a mucous membrane, the mucus secreted would impede vision. I do not recollect having seen pustules on any part of the eye that was not covered by this membrane.

* * * * *

I am
Your obliged friend,
W. C. Wallace.

BILIARY CALCULUS—ULCERATION of the GALL BLADDER.

To the Editor of the Medical Gazette.

Sir,

In the winter of 1825 I was suddenly called in the night to Count ——, with whose family I was residing as medical attendant. He was suffering from severe pain of a spasmodic kind in the stomach, accompanied by a good deal of flatulence; and as I was well acquainted with his habits, and found upon inquiry he had been eating lobster for supper, I naturally attributed the attack to indigestion. The medicines prescribed

produced the desired effect, and by means of antispasmodics, and the warm-bath, the pain speedily subsided. The following day purges and absorbents were given; and as there was a degree of fever and general uneasiness, a few ounces of blood were taken from the arm. This succeeded in allaying all uneasy sensations, and in a day or two the Count was quite restored to health.

This was the first time, during a residence of two years in his family, that I had ever heard him complain of any indisposition. He was a stout athletic man, in the prime of life, given to corpulency, and a *bon vivant*. He told me he had before suffered from spasms of the stomach, caused by indigestion.

The following year he proceeded to Russia, and was at Moscow during the coronation, when he was again attacked in the same way; and meeting with an English physician there, he was treated much in the same manner. It was found necessary to bleed him from the arm; but the attack was attributed to indigestion. He soon recovered, and had no return of this or any other complaint, enjoying, indeed, perfect health till the summer of 1827, when riding in Hyde Park, he was suddenly seized with violent spasmodic pain at the scrobiculus cordis, and fell from his horse.

The physician who was called in again ordered him to be bled; and as he knew the Count personally, and was acquainted with his mode of living, he laid much stress upon his observing a more abstemious diet in future.

In passing through Dieppe, where I was remaining with the family, he gave me an account of his illness, and I begged him to follow the advice of his friend in London, and recommended him to dispense with one meal per day, or change the *dejeuner à la fourchette* for a cup of tea and bread and butter.

He had not been a month in Paris, before I received a letter from his secretary, to say he was again ill in the same way as he had been in London. He had returned late from a ball, and as he was getting into bed was suddenly seized with the same spasmodic pains as on the three former occasions.

I left Dieppe the same evening for Paris; for as we were about to proceed to Poland, I was alarmed at the frequent repetition of these attacks, and wished to obtain some more decided knowledge of their real cause.

Upon my arrival, however, I could procure no farther intelligence than that an English physician had been called in; and as the patient had been at a ball, and had eaten ices and cold meat for supper, so indigestion was naturally the cause suspected, and laudanum and æther had been administered, and the following day bleeding and purging. This evening, however, the patient again went into society.

The day after I arrived, he told me he had suffered much less than in London, but it was the same kind of attack; and as he believed that he had caused it by imprudence in diet, he determined in future to be more abstemious. This made the fourth attack in two years. We all proceeded in the autumn to Poland, and from this time up to the period I am about to mention, a space of four years, I am not aware that he had any return of his spasms. I have some idea, however, of a slight attack once during this period in Warsaw, but I cannot state it as positive.

It was in the summer of 1831, just before the cholera declared itself, that I was summoned to see the Count, who, with many of the nobility of Petersburg, had shut himself up in an island, which is a summer residence in the suburbs, with a view of avoiding all connexion with persons who might have been exposed to the contagion of cholera.

He informed me he had a slight sensation of his old complaint, but he had taken a dose of physic, and thought it would pass off. He complained of a sense of warmth in the region of the stomach, but of no acute pain; he ascribed it to having transgressed by eating a breakfast of cold sterlet soup.

As I was much occupied in making arrangements with the police, in case the cholera should visit us, I left him, and said I should call again in the evening. I found, upon my return, that the physic had operated freely, and the uneasy sensation had subsided; but as there was some fever and fulness of pulse, and as he begged of me to bleed him, I complied with his request.

He was immediately relieved, and slept well all night; and when I saw him the following day, he was sitting at his table writing, and said his attack had passed off; his bowels were open, and he rode out in an open carriage in the evening.

The day after, I found him much oc-

cupied in making the necessary quarantine arrangements for his household. He said he was quite well; and added, in joke, *I have had my cholera:* but, he added, I must beg you now to leave us, for we have engaged a medical man to remain here during the whole of the time the cholera is in this city; and as he will not leave the island, we shall not be exposed to contagion by the doctor, at least. He was in good spirits; said his attack had quite passed off, and told me he wished me well through my difficulties, as he knew I had been appointed to a large temporary hospital. This was on the 15th; the cholera having been officially announced the day before —the 14th June.

I heard no more of the Count till the 24th; when, by chance, I met one of his servants in the street, who informed me he was very ill: and though I had just quitted the hospital, and notwithstanding the injunctions I had received, I hastened to the country, and with difficulty got admittance to his bed-chamber. I found him much reduced, from the treatment that had been adopted. He was glad to see me; but as I approached his bed he shrunk back, evidently afraid that I might communicate the cholera to him. His medical attendant informed me, that since I had last seen him he had been attacked with inflammation of the liver; that he had bled him three times from the arm, and had given forty-five grains of calomel internally. I had hardly time to gather these particulars when the friends who were about him begged me, for God's sake, to leave the house, for I had, by this act, frustrated all their measures of quarantine, and had probably introduced the cholera already among them. They requested me not to return, and strict orders were given to admit no one who came from the town. Upon leaving the place, I had unpleasant forebodings of the result of this case. I heard no more till the 30th; when I was summoned, in the night, to attend with five physicians, as the patient was much worse, and he was considered in danger. The medical attendant gave me the following account. Two days after my last visit, a biliary calculus had been found in the stool, of a pear shape, measuring more than an inch in length, and about six lines in its broadest diameter. Previous to passing this calculus, there had been a good deal of fever and local irritation, which were not relieved by the voiding of the stone. The mercury had produced salivation, and the parotid gland on one side was very much enlarged. The patient could articulate with difficulty; the pulse was small, quick, and intermitting frequently; and the patient expired forty-eight hours after the passage of the calculus.

It was almost impossible to get the body opened, owing to the general state of alarm produced by the cholera and the public disturbances at the time. I determined, however, to get it done at any rate, as I had suggested that the gall-bladder was ruptured. I succeeded in ascertaining this point. The gall-bladder was hardly to be traced; a large abscess was situated immediately under it, and the whole of the fundus of the former was ulcerated away. Time was not allowed to make any farther investigation, nor even to open the intestines.

This case appears instructive, as far as the evidence is presumptive that the spasms of the stomach, occurring so frequently during life, and always from the habits of the individual attributed to indigestion, were caused by the passage of gall-stones; or from the introduction of this identical one into the mouths of the ducts, from which it again receded.

Your obedient servant,
GEORGE WM. LEFEVRE, M.D.
Physician to the British Embassy, St. Petersburgh.

St. Petersburgh, Nov. 1833.

CASE OF TUMOR IN THE REGION OF THE LIVER,

With discharge of Biliary Calculi through the parietes of the Abdomen, which terminated favourably.

BY WILLIAM MACNISH, M.D.
Surgeon, Edinburgh, late Surgeon 63d Regiment.

A LADY, aged about 27, of delicate constitution, the mother of several children, after a residence of between two and three years in the West Indies, during which time she enjoyed tolerable health, when at Barbadoes in 1817, experienced an attack of acute *hepatitis.*

It commenced suddenly with sickness and vomiting, severe pain, tension, and fulness of the region of the liver, the

pain greatly increased by pressure, and extending to the right shoulder. There was cough, with *dyspnœa*, and inability to lie on the left side; pulse frequent, with urgent thirst; furred tongue; and hot dry skin. By repeated bleedings, saline purgatives, blisters, and the exhibition of mercury so as to affect the mouth, the active character of the disease was in a short time subdued; but it was two months before the lady could leave her room, and then in a very debilitated state, and unable to walk upright.

Her convalescence proceeded so slowly, and her state was altogether so unsatisfactory, that a return to Europe was deemed essential to her recovery. Circumstances, however, prevented her leaving Barbadoes till May 1818, when she sailed for England.

During the voyage her health improved considerably; but towards its termination, she began to complain of constant uneasiness in the region of the liver, in which there was an evident fulness, and some pain on pressure.

On her arrival in London, early in August, there was a visible tumor below the margin of the ribs, with considerable surrounding tumefaction, and so tender that she could not bear the least pressure of the fingers. Its surface was discoloured in two places, at which it seemed probable the tumor would point. At the end of the month, however, there was no perceptible change.

Sept. 15th.—The tumor had greatly decreased, the pain and tumefaction had subsided, and she could bear to have it freely examined. The discoloration was now confined to one spot, where there was an indistinct feeling of fluctuation. The tumor extended from the margin of the false ribs of the right side to within a couple of inches of the groin, the glands of which were enlarged and painful. Its greatest breadth was little more than two inches, it became narrower as descended, and at its termination was not more than an inch in breadth. It was irregular and hard; and so thin and superficial, that in grasping it the fingers could almost be made to meet behind it. At its upper part it adhered to the *parietes* of the *abdomen;* the remainder was unattached and moveable. She complained of a sense of fulness or weight, and of occasional lancinating pains in it. Her appetite was weak, and her health considerably impaired.

It was agreed in consultation, that the tumor should be opened at the inflamed spot, and a tent introduced, with the view of giving vent to any contained fluid, and of establishing a drain.

20th.—Tumor opened; a small quantity of healthy-looking pus followed the lancet, and more was obtained by pressure; but the discharge was altogether inconsiderable, and in a few days was little more than sufficient to moisten the tent, which was daily introduced. So rapid a diminution of the tumor now took place, that, by the first of November, it was not half its original size. On the 9th she complained of much pain in the tumor, nausea, headache, and other febrile symptoms, which continued with little abatement till the 15th, when, on withdrawing the tent, I was surprised to find a hard substance in the wound, which proved to be a gall-stone, about the size of a nut. On the following morning another was discharged. A state of comparative ease now succeeded, and continued till the 25th, when there was a recurrence of the pain, followed (on the 29th) by the expulsion of another calculus and some fragments. Her health now improved daily; and, though the tumor for some time felt hard and painful on pressure, it was productive of little more discomfort than that occasioned by the daily renewal of the tent.

In March 1819, she was in the fifth month of pregnancy, though the menses had not appeared since she was first taken ill. As utero-gestation advanced, the liver became uneasy, and her general health suffered. On the 20th May she had a severe and lengthened shivering fit, succeeded by a most distressing hot stage and great debility. Premature labour followed.

A new train of symptoms now supervened. A fortnight after delivery she was seized with violent pain in the epigastric region extending to the back, directly under the scapulæ, and stretching down the left side, accompanied for the first time with universal yellowness of the skin. For two days the pain continued severe, and was succeeded on the third by a profuse discharge of a transparent glairy fluid, which, during the three days of its continuance, wetted a great many cloths. Twenty-three large towels were shewn me, on most of which, though the fluid itself was perfectly colourless, a tinge of yellow or green remained.

From this period she experienced a

succession of similar attacks, at intervals of from four to six weeks, the pain uniformly commencing in the epigastrium, extending to the back, and ceasing on the appearance of the discharge, which generally continued about forty-eight hours, but in decreasing quantities till March 1820, when the paroxysms, which had been gradually assuming a milder character, finally ceased. She then went to the country, and took much exercise in the open air. The change was productive of the best results. Her appetite returned, and she gained strength rapidly, and even became stout. She complained at times of uneasiness and sense of weight in the side; but these feelings were of short duration, and productive of little inconvenience. By the end of the year her health was re-established; and, with the exception of occasional slight dyspeptic attacks, has continued tolerably good since.

From the first appearance of the bilious hue to the cessation of the paroxysms, a period of ten months, the skin was more or less yellow, each successive attack being either accompanied or succeeded by a deeper tinge.

In two only of the paroxysms was there any irritability of stomach. The appetite was always defective for some time before an attack, and the bowels were rather slow; but, until the skin became jaundiced, the evacuations, though often unhealthy, generally contained a fair proportion of bile.

The tent, which had been constantly in the side since September 1818, was in August 1821 withdrawn. Within a month after, the wound had completely cicatrized. I have no doubt the tent might have been removed with perfect safety at a much earlier period, but it was continued at the desire of the patient, who firmly believed that the healing of the wound would be followed by unpleasant consequences.

For a little space around the cicatrix, which is nearly two inches below the margin of the ribs, the liver is hard, and adherent to the abdominal parietes, and feels uncomfortable on pressure; but no vestige of the pendulous tumor can be discovered.

As to the treatment, it is unnecessary to say much. For the most part it consisted of mercury in some form or other. Generally small doses of the blue pill, either alone, or when a purgative effect was required, in combination with the extract of colocynth. The nitro-muriatic acid bath was used for some time, seemingly with advantage. For the alleviation of the pain during the periodical attacks, various measures were resorted to, but the most successful were opiates in large doses, fomentations, and stimulating frictions. Light tonics, as the cascarilla or quassia, with the carbonate of soda, and infusion of rhubarb in such doses as to regulate the bowels, were in general use throughout the disease, and were very beneficial *.

MUSINGS WITH THE MUMMY.

To the Editor of the Medical Gazette.

Decipimur specie recti ——— (?)
Ar. Poet.

Sir,

Many writers have dreamed dreams, and related the visions that they have dreamt of. Addison, Swift, and Johnson, each of them had their dreams; and I have had mine, and am going to tell it. Having gone to look at the mummy which has been lately opened at the College of Surgeons, I tarried so long over its remains, speculating upon time, men, fortune, and the other conditions of mortality, that I forgot to depart with the crowd that surrounded me, was left behind, and locked up safely with my ruminations in the museum. Night came on, I fell asleep, and dreamt that the mummy was standing by me.

The inquiry which arose instantly in my mind, was to ask the mummy what it thought of the world now present? "Were I to indulge my personal feelings," it replied, "I should curse those ruthless fingers which unrolled my limbs and traced off my hieroglyphics with as much celerity as if they had been had been handling a popinjay in sport. Woe is me!" exclaimed the phantom, "that the carcase of an incense-bearing priest of Egypt should have been exposed to the gaze of intellectual curiosity in the schools of London!" As it spake these words, I looked attentively at the object, and recognized the features of a negro, with the flat nose and pouting lips so finely sculptured on the fragments of the

* Ed. Med. and Surg. Journ. Jan. 1834.

Egyptian marbles in the British Museum. "Surely," I interrupted, "your complexion, as well as your physiognomy, must for ever set at rest the long-disputed question as to whether the ancient Egyptians were white or black." "Black, to be sure," returned the mummy; "all the descendants of Ham were black." "Just so," I replied; "but how was it with our first parents? You, who lived so much nearer to the commencement of time, perhaps can tell." "With us," observed the ancient phantom, "three thousand years ago, a favourite theory prevailed, that the progenitors of mankind were neither white nor black, but whity-brown." "Strange, indeed!" I ejaculated; "one of our bishops, in India, fancied the same thing: it was very clever, was it not?" "Yes," said the mummy; "but is it true?"

After a short pause, I asked eagerly, "if it had not received some gratification from being brought forth again to light?" "Knowledge," it answered, with unearthly solemnity, "is always gratifying. The knowledge that gleamed so suddenly upon me, like light, in so many pencils of rays from the heads of so many dignified spectators, awoke and astounded me at the same moment. My first feeling was that of having arrived at the region of spirits, in an elysium far beyond the confines of my native land, above the prolific sources of the Nile. But at that moment all was din and confusion, nor do I remember any thing distinctly, until I had reposed at leisure openly within the walls of this famous museum. In a very little time, all knowledge seemed to concentrate itself upon my senses, shedding a flood of information at the dawn of every day; when, like the head of young Memnon, I uttered a voice at sun-rise, and hailed the appearance of new light, with the consciousness of a fresh acquisition of knowledge."

"What," I asked, "is the knowledge that strikes upon your understanding the most powerfully?" "That of medicine," it said; "because few in this apartment speak of any thing excepting of medicine." "And what do they say of my favourite science, my own profession?" I inquired, with the utmost earnestness. "Say!" it retorted in scorn; "much that relates to politics, but little that speaks of professional wisdom. The preparations on the walls of this museum shall rise up in judgment against this generation; for here is the handiwork of the physiologist, and the permanent emblems of intelligence, rightly directed—here is the mark and the badge of a mind appropriated to the investigation of life; not to a mode of livelihood—to the structure of the animal body; not to the construction of medical association. These are the monuments of genius, designed without laws, erected without contest, appreciated without valuation, and preserved without interest. But the physiologists that daily surround me talk of alterations with which science has nothing to do, and of an equality which is not commensurate with human existence ——" "What!" I demanded aloud, "do *you* deny the equality of knowledge?" "Nay," said the phantom, composedly, "all men who possess equal knowledge rest upon equal bases, and are describable between equal parallels: things that are equal to the same, are equal to one another. But life practically does not admit of mathematical exactitude and certainty of application; as may be proved by the experience of a single life, and the collective history of nations. The world has been pell-mell from the Babylonish captivity down to the present hour, and no set of reformers can ever adjust it. This, which was the case 3000 years ago, is likewise the case to-day." "Alas!" I interrupted, "poor ignorant mummy!" "What"—continued the phantom, without seeming to notice my interruption—"what can the tiny laws of man produce?—they can produce nothing: personal talent has always gained the ascendant of itself, independent of every newly-framed statute and all changes of faction. Look," it added, pointing to the portrait of John Hunter, "and ask that painting, what were the laws that made that man?—it will answer, the bountiful laws of nature alone. Truly," it maintained, "I cannot but bow before Sydenham, the venerable patriarch of your physicians, admire the strength of Sir Astley Cooper, acquiesce in the quaint philosophy of Abernethy, and follow the clear sagacity of Gooch;—men whose personal talents, and insatiable love of excellence, were a law to themselves." "Of a truth," said I, "these medical reformers will Mac-

adamize the profession; none will be admissible except they can pass through their newly-invented loop-hole of study: the small and the great will be equally rejected." "Nay," returned the phantom, "not so: no act of parliament can ever reverse the universal decree of nature, that the best genius, the best learning, and the best industry, confirmed by the best habits, shall carry the day. In the practice of your profession now, as it was in my age, much must be left to time, chance, and the genius of the practitioner. He will be the most successful, and the most approved of, who, in spite of all set laws and the evermore multiplying expedients of reform, shall the most thoroughly understand the capacity of his own intellect, and the most closely follow the dictates of nature at the bed-side. On this foundation stood Hippocrates, Morgagni, Babington; for under the hands of a clever practitioner, nature herself may be held in thraldom, and reduced to healthy obedience: as the common landscape is thrown by an artist of taste into exquisite composition, by grouping ordinary objects the most happily in their respective lights and shades. Life, indeed, is too short to be dissipated in unlimited studies, and too uncontroulable to admit of any preconcerted scheme of existence; the brains of your youths now cannot hold more than ours did formerly, nor can any definite laws or acts of parliament compel men to be learned against their wills, or able against their natures; neither can the proclamation from a Council, nor the bye-law of a College, compel the public at large to value a man above his merits, and remunerate him beyond his deserts. This was the truth three thousand years ago, and it is the truth to-day." "Ah! spirit of a mummy," was my conclusion, "if these things be so; if truth three thousand years ago was the same as it is to day, surely I may ask in the language of Job, 'What is wisdom, and where is the place of understanding?'"

* * * * *

I am, sir,
Your obedient servant,
MEDICULUS.

Jan. 22, 1834.

SKETCHES OF THE PRESENT STATE AND FEELINGS OF THE MEDICAL PROFESSION IN THE PROVINCES,

And more especially in Liverpool and its Vicinity.

By JAMES COLLINS, M.D.

My object in writing this paper is to illustrate some of the feelings and views of provincial medical men on the subject of medical reform, and thereby, perhaps, to enable our friends in the capital to form a more correct estimate of us than they have hitherto done; for I feel convinced that contributions from the country, descriptive of the state of the profession there, are absolutely necessary for a correct and enlarged view of the whole; that without them, it will be difficult to devise any well-digested and practicable scheme of medical legislation. With this view, if allowed by the Editor of the Medical Gazette, I shall contribute some account of the projects that agitate my own neighbourhood, and of the peculiarities with respect to practice and remuneration that distinguish us from every other part of the country. In doing this I by no means pretend to act as the organ of others, or in any official capacity, but simply as a spectator of the scenes passing around me.

Until lately, we were, in this part of the country, pre-eminently distinguished for not troubling our heads with any thing, but with the ways and means of getting cash and practice. The man who thought of any thing else was unfit for Liverpool; and, provided he were likely to succeed, he was contented with things as they were, no matter how corrupt and morally debasing: hence, he supported the political candidate that was likely to serve his interest, and adopted or changed the religion that served or marred his prospects. In fact, the notorious corruption of our borough extended itself to all branches of the profession; but now things are changed; we are all reformers. Men that but a few months ago shuddered at the very idea of a popular meeting, are now medical agitators, ready and willing to put their shoulders to the wheel; their whole frame seems to have changed with the times—how or by what means I cannot say, except that the clamour and rest-

lessness of their junior brethren forced them into the arena. Such is the effect of collision and public opinion.

A few weeks ago our first reform meeting was held. The chairman was one of the oldest and most respectable physicians here; his name gave a character to the meeting, and congregated us all together for the first time. The object was to vote thanks to the medical gentlemen who retired from the Aldersgate-street Dispensary, and to censure the laws and principles of that institution. No sentiments could be more liberal than those we expressed and adopted: we praised the conduct of the gentlemen who retired, and reprobated that of the subscribers; but, alas for consistency! the very gentlemen who moved and seconded these resolutions were attached to our public institutions, and many of them held office by the very same laws they reprobated in London. But a few weeks before we met, three physicians and three surgeons were appointed to an hospital here by subscribers, most of whom were only of a week or fortnight standing; and, at the very same time, a contest took place for a vacancy in one of our dispensaries, —and they who even became subscribers on the day of election were allowed to vote for their friend. This is the law still; but by some strange perversion of moral feeling and rectitude, the gentlemen thus elected came forward at our meeting, and denounced by their presence and their votes the practice in London which they cherish in Liverpool. Hence the advantage of a communication from the country. Without this, you, nor other parts of the country, could never suppose that our private and public sentiments would differ so much; that we act and abide by the very same laws here we condemn in London.

Our second reform meeting was held last week. The object was to petition Parliament to revise the state of the profession. Nothing could equal the contradictory opinions expressed; some were for this, and others for that; no two could agree; what appeared a panacea to one, seemed ruin and dismay to another. At first the meeting was calm; but, as the debate advanced, the discussion became warm, and all became involved in confusion and contradiction. To allay the ferment an adjournment was moved, and a resolution passed to call a general meeting of the profession.

These facts I mention to shew that we are not idle, that we share in the movement communicated from the capital. Indeed, all sorts of schemes and opinions are afloat, and every means taken to agitate them in public and private. In the medical library, you scarcely hear any thing but discussions on the various projects of medical reform advocated in the London journals. Some arrange themselves under the banners of the Medical Gazette, some are for the Lancet, some for this and that publication; others again affect, or feel, too much independence to pin their faith on any man, and, pregnant with schemes and projects of their own, lament their provincial residence, that their distance from the seat of legislation must prevent them from taking the active part in this question their talents and originality would warrant. Pass into the streets the same scenes present themselves. If but two or three medical men are gathered together, their conversation instinctively turns to the subject. Their souls seem absorbed in the question; and, indeed, the tone and courtesy of their society seem changed by the bitterness and dogmatism with which they mutually defend and advance opinions. The chemist differs from the apothecary, the apothecary from the surgeon, the *pure* surgeon from the general practitioner, and the physician from them all; each, as in the fable, thinks there is nothing like leather, and consequently adopts and defends the views suited to his interest. All agree that something must be done, but no two can agree about what that something ought to be. Some, like their prototypes in London, are for one Faculty and one denomination of practitioners—namely, Doctors in Medicine, and for allowing all to practise, under this name, every department of the art, as it may suit their interest or inclination. This class of medical reformers includes a great portion of the junior general practitioners, who, from one motive or another, are ambitious of the title of "Doctor," without the trouble or expense of attaining it, and hostile to the existing distinctions, as implying grades of inferiority not flattering to them. If you ask these gentlemen what they mean by one Faculty—how and where it is to be constituted? they differ, like their brethren in London, from one another. Some are for doing away with all Colleges, as remnants of antiquated

times. They say there ought to be no distinction or aristocracy in science, but talent and merit; and therefore, that he who can give proof of medical acquirements, no matter where or how he got them, whether in school or out of school, in one year or six, ought, *ipso facto*, to be dubbed a Doctor in Medicine, by some Board or Faculty constituted for this purpose, without reference to any thing else.

Others, again, of the same class, maintain that this title ought not to be conferred on any one who has not passed through a fixed and protracted course of study, in some College or University authorized to give degrees, and then only after a strict and public examination. They are for doing away with all provincial or secondary schools of medicine, or, at least, for not allowing their certificate. They say they are not legitimate avenues to the profession; that they are species of pauper or charity schools, where pupils are admitted, in nine cases out of ten, for little or nothing, and where they receive certificates often without having attended. The Lecturers (or, as the phrase goes, the Professors) of these institutions, calculating alone on the indirect advantages, and not on the fees of the pupils, are not very scrupulous how or whom they admit, provided they have a school; and hence, that the result of such numerous and cheap manufactories of medical men, must be ruinous to the profession: that it is already too full, without opening these back doors and sluices to inundate it.

Another class, comprising a great portion of the senior general practitioners and the great body of the physicians, are for keeping up the distinctions of physicians and surgeons; though they differ as to the ways and means of conferring them. Some think that the existing Colleges, with some slight modifications, might suffice; others, again, think the whole system must be remodelled and assimilated in this country—that some standard of literary and scientific attainments, as on the Continent, must be fixed for those who even wish to be students in medicine, and that the time and expense must be increased, to check the redundancy of professional labour in the market, and that no certificate or course of lectures be allowed except given in a College authorized to confer degrees: far from wishing to confound all classes and distinctions in medicine, they feel convinced that their mutual interest requires them to be kept up, and that since they began to merge into one another—since the surgeon began to encroach on the province of the physician, and *vice versâ*—that they have all suffered by mutual competition and jealousy, that they have been cutting each others throats and reducing to a low and disreputable scale their fair and usual remuneration, with the view of *ousting* each other; and that the only persons who gain by this disunion and distrust are the chemists and druggists, who are now every day becoming more and more the general practitioners of the lower and middle classes, and that the only thing now wanting to complete the ruin and degradation of the profession, is the enactment of the schemes of the levellers.

Such are the various shades of the views and opinions of our medical reformers—each accuses the other of illiberality and selfishness, and claims for himself the praise of enlarged and disinterested views. They all agree that something must be done—that every department of the profession is getting worse and worse, and losing its station and standing in society. They also agree that the encroachments of the chemists and druggists must be checked, and that there ought to be some fixed scale of professional remuneration, either in law or usage, to prevent the degrading practices resulting from competition; that porters are often better paid than surgeons; that the latter may be had in abundance for one shilling a visit, whereas the former generally cannot, though the one call themselves gentlemen and the other only labourers. Physicians, too, are treading fast on the heels of the surgeons, and tumbling, from the same causes, from their once high and enviable position in society; and all in consequence of their low and degrading scale of professional charges. But my object is, as I have said, to exhibit our provincial views, that our friends in the capital might comprehend us more fully. I have, however, exceeded the limits in this communication I originally prescribed to myself, and perhaps, Mr. Editor, those you would be inclined to grant me. In my next, if allowed, through the medium of your columns I shall detail some of the pe-

culiarities in our local customs, that distinguish us from our brethren in every other part of the kingdom. The subject may seem local, but I think it will not be altogether destitute of interest, nor undeserving a place in your pages.

Liverpool, January 18, 1834.

CIVIS MEDICUS

ON MEDICAL REFORM.

LETTER V.

To the Editor of the Medical Gazette.

SIR,

THERE are two orders of physicians legalized in this country, viz. M.D.'s and apothecaries: (the surgeon, so far as he practises pure physic, is by usage, in point of rank, an M.D., or nearly so.) In France likewise, there are two orders of medical practitioners—doctors of physic or surgery, and officers of health. The second order of medical practitioners of France and England is of modern growth: old English legislation recognized no physician but the M.D.; and the order of officers of health dates no farther back than the beginning of the present century (*Archives Générales*, Nov. 1833.)

In each country the question is now agitated, whether there should be a second order of physicians? and the general feeling of those, not pledged by private interest to the present status, and anxious for the removal of acknowledged defects and abuses is, I think, in favour of the negative answer. Of the reformers in this country who contend for a single Faculty of Medicine, there are, I know, some that do not thereby imply the fusion of existing orders, or suppression of the inferior, but merely a consolidation or centralization of the powers at present exercised by the different governing incorporations, leaving as before the division of the profession into two grades of practitioners; but many—I suspect the majority—of our reformers, that speak of a single Faculty as a desideratum, seem to mean, not a central and uniform government for the whole profession, as contrasted with a polyarchy like the present, but a single and uniform plan of education to be prescribed for all, and consequently an equality of rank and privileges amongst individual professors.

In France there can be no doubt that the feeling of the profession is in favour of legalizing but one order of physicians; a glance at the report in the *Archives Générales* for Nov. 1833, of the debate in the *Académie de Médecine*, on the *projet de loi sur l'enseignement et sur l'exercise de la médecine*, is sufficient to shew this. The profession, then, has pretty decidedly pronounced its judgment, that (" as the diseases of town and country, rich and poor, sea and land, &c. are at bottom the same," and " seeing that opthalmography, midwifery, military surgery, &c. &c. constitute with medicine one indivisible whole, based on the same principles, employing the same means," &c. &c.) there should be but one order of professors of the healing art; and that admission into that order should be open to none falling short of a fixed and comparatively high standard of attainment. Now, in order correctly to estimate this decision of the profession in England and France, we must ascertain how far the question of medical reform is of medical competency—how far the physician is, *as such*, qualified as *a legislator* to judge what are the best means of removing those grievances, of the actual existence of which he is the only competent *witness*. What, then, are the attainments required to qualify for medical reform? The same unquestionably that are demanded of the reformer of the church, of the law, of the army, of our colonial or mercantile systems, &c. &c. viz. not professional skill or learning, but political knowledge. Generally speaking, you might as well consult a bishop, or judge, or general officer about reforms of their respective professions, as a physician about medical reform; for, 1st, he is either a member of one of the governing bodies, or else a subject, and in either case partial, and therefore unfit for the judgment-seat; or, 2d, he is probably, however cunning in physic, quite an abecedarian in statesmanship; nor does such a statement imply censure. Who studies legislative science, or political dynamics, in this country? No class of men—not even our hereditary senators. It is not then a reproach, but a fact, that medical men are, as a class, quite unfit to decide upon the best method of reorganizing or reforming

the profession. To heal the body natural is one task—to cure the body social or politic is another, and, as well in means as principles, a quite different undertaking. The French are but tyros in polities, while in medicine they are masters. Accordingly, in the report of M. Double, and the debate thereupon, we find every consideration and argument broached and insisted on repeatedly, and with force, except the principal one, which is political—viz. the ability or inability of the people to dispense with the services of a cheap class of physicians. That consideration is indeed noticed, but by no means in the satisfactory way in which the others are handled; yet upon the decision of the point just stated hangs the answer to the question, whether there should be one, or several orders of physicians? for there are but three conceivable arrangements compatible with the existence of a regular *corps medical:* 1st, a single order with a high standard, such as had existed for about a century and a half before 1704 in this kingdom; 2d, a single order with a low standard, as if the College of Physicians were abolished, and medicine consigned to the sole care of the gentlemen of Blackfriars; 3d, a scale of orders double, triple, &c.

Now No. 1 has been tried for some 150 years in this country, and has utterly failed. Why? It secured social respect and high professional and general attainments to the Faculty of Physic, yet it totally failed. Why? The physic was too dear. The people, after a couple of centuries of struggle with the College of Physicians, succeeded at length, by chance or by trick, in 1815, in obtaining the institution by charter, of a second and cheaper order of physicians, who, judging by the most unexceptionable of all tests in such a case,—their amount of practice,—have answered the ends of their foundation, and given general satisfaction.

Now with respect to No. 2, I have no doubt that John Bull would much more willingly dispense with his M.D.'s than with his apothecaries, and that such an arrangement as No. 2 would consequently, in the main, meet the popular wants; but what would be its permanent effect on the profession? I agree, therefore, with your correspondent, "A General Practitioner," and yourself (Med. Gaz. Nos. 15 and 16, 1834), in considering the question virtually settled by the substitution, by the natural operation of things, and mutual play of demand and supply, of arrangement No. 3 for No. 1 in this island; and, indeed, the institution of the *Officiers de Santé*, some dozen or fifteen years before 1815, seems to shew that like causes had been previously at work in France, in the production of effects similar to those just referred to the natural working of society in England; and that in that fine country also the want of a second and cheaper order of physicians has been experienced. The question, then, has been experimentally decided; but although we might rest the whole argument on these unequivocal results of experience, let us touch briefly on the general arguments for a scale of orders, as contrasted with either of the simpler arrangements above specified.

The interests to be provided for are threefold:—1st, the convenience and comfort of the people; 2d, the interests of the profession; 3d, the promotion of medical science, or, in other words, the public health, as an object of senatorial care. Now the first and last-mentioned interests require each an order of men for their especial protection. The popular convenience requires constantly a large class of cheap physicians, while the interests of science require a much smaller class of men of high attainments; in other words, the public health requires for its daily uses a numerous body of practitioners of moderate attainments; and for its occasional uses, as well as for its future improvement and protection, a comparatively small body of men of expensive education, and consequently of liberal fees or salaries, as well as attainments. In this latter class I include teachers—viz. professors, men devoted to experiment and study, &c.—who, if minute accuracy of division were necessary, might very well be considered as a third class. Now of the three interests to be provided for, the second above mentioned is identified with the other two. If the profession at large could possibly have a permanent interest incompatible with the public health, which the very alphabet of legislative science teaches to be, in a free country, impossible, it would be the duty of the senate at once to annihilate that interest: as it is, the art of medicine must found its hopes of, and pretensions to, public patronage, on the same grounds as do

other superior arts—viz. on the number and magnitude of its services, alias, on its utility. Whatever arrangement or organization, therefore, is best calculated to increase the usefulness of the medical profession, must be most conducive to medical interests. Dismissing, then, professional interests, as not requiring distinct consideration, let us glance at the only questions whose decision is required by our argument. How is the popular convenience, and how the promotion of medical science, best provided for? There are two classes of men, speaking comprehensively, that adopt the medical profession: 1st, men of small means, to whom immediate employment and emolument are necessary; 2d, men of independent incomes, and who can maintain a respectable appearance, without professional gains. Now the former only can be expected to work for small remuneration: their education has been comparatively cheap; their rank and pretensions are relatively humble. To such men must be committed the daily and hourly care of private health. If their skill is usually limited, so is likewise their responsibility. Most cases require, speaking again comprehensively, no more than an apothecary's attentions; and for those that demand more than average skill, there is, according to the means of the party, either the hospital medical officer, or the consulting private practitioner. Now the very circumstances that fit the lower class of physicians for popular use, unfit it for the promotion of science: the limited means that disqualify them as students for wide and extensive studies, compel them afterwards, as practitioners, to devote all their time and thoughts to the lucrative part of physic; whereas, to turn to the second, or wealthier class of physicians, the very affluence or independence of fortune which enables them to undertake costly preparations as under-graduates, will enable them as M.D.'s to await the vacancies that from time to time occur in the higher departments of medical life, and to dispense with small but immediate profits, in expectation of higher reversionary gains. The second class is therefore that on which the promotion of the public health, *alias* of medical science, by writing, teaching, experiment, and observation, may be considered naturally to devolve, as possessing at once most learning and leisure. By this class exclusively should be discharged the functions of the consulting practitioner, of the professor, of the medical officer of charitable and other institutions, and probably also of the army, navy, &c. &c. &c.

The division into orders is therefore natural, and a not only unforced, but even a long-resisted principle, called into motion by the reciprocal action of demand and supply, and whose adoption is convenient for the people, and advantageous to medical science and the national health. What, then, shall we think of the scheme of a single order, whether with a high standard or a low? Why, that the former would leave the small town tradesman, &c.—every man who could not afford at least four or five shillings per visit,—no choice between the quack or miracle-monger and the hospital, the unhappy condition of this metropolis for many a long year before 1704; while it would deprive large rural districts of professional aid altogether. Whereas the latter, or low standard system, would reduce what should be a learned and honoured profession, to the level of a homely and comparatively illiterate trade, and would leave, without any adequate provision, the interests of medical science and education. Now the inconveniences of these plans are avoided, while their advantages are secured by the double-order plan, and the convenience of individuals, above all of the more humble classes, is provided for, while the higher interests of society, and of the profession, are duly attended to. So that, proceeding on the principle generally adopted in this country in all matters in which political party has no interest—viz. of leaving things to find their own level and proper position, according to their inherent weight and energy—I see no excuse for one moment's hesitation between the double and either of the single order schemes.

With regard to the propriety of a second order of surgeons and apothecaries, I have no room for more than a few words. As to the surgical department, every thing I have said to shew the necessity of a second order of physicians, applies equally *mutatis mutandis*, to prove the utility of a second order of surgical practitioners: a lower class being required for the general convenience, and a higher for the service of hospitals, surgical schools, the army, navy, &c. &c. An improved surgical

education of the general practitioner would be in effect the institution of the former, or inferior class. In like manner a superior, and for large towns, very necessary class of apothecaries,—such as are alone permitted to practise pharmacy in several continental countries,—might easily be established, by the Apothecaries'-Hall being empowered to license two classes of medicine venders: 1st, such as the present chemist and druggist, who, with some exceptions (the Battleys, Humes, Gardens, &c.) is but a tradesman; 2d, another class, to be required to go through a liberal course of study in botany, chemistry, physics, &c. On the services such a class of men might render to criminal justice, medical police, pharmaceutical chemistry, &c., I shall not dilate: those who doubt it may consult, for example, *Henke's Jahrbuch der Gerichtlichen Medizin*, first part, where he speaks of the liabilities of Prussian apothecaries.

With your permission, I shall in my next consider—1st, the nature and extent of the provisions of compromise between existing interests that should accompany organic reform in the Royal College of Physicians; and, 2d, the propriety of retaining the principle of *examination* and *grace* as channels for young ambition or acknowledged merit, from the lower to the higher grade of the profession; and, 3rd, the question, whether pharmacy can be, or should be, wholly divorced from physic.—I am, sir,

Your very obedient

CIVIS MEDICUS.

Friday, 17th Jan. 1834.

MEDICAL GAZETTE.

Saturday, February 8, 1834.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

MEDICAL REFORM IN GERMANY.

PRUSSIAN SYSTEM OF MEDICAL EDUCATION.

WE beg to call the attention of our readers to an important document which they will find in our present number. It is an account of the state of the medical profession in Prussia—in that country which is allowed on all hands to afford an excellent model for public education—the combined result of the wisdom of the ruling prince, and the matured experience of the ministers by whom he is surrounded. A stronger proof of this cannot be given, than the fact that the French government appointed the learned Victor Cousin to visit Berlin, to make himself acquainted with the Prussian system, and to report to them the result of his inquiries. This he has done; and the valuable statement which has been published in consequence, has excited a general interest throughout Europe. An English version of M. Cousin's report, we understand, will shortly appear, and will lend its support to, if it form not the basis of, the great measure relative to public instruction which is to be brought forward in the present session of Parliament by our enlightened Lord Chancellor. But the document which we take credit to ourselves for being the first to publish from the German original by Dr. Rust, without going to the extent of the report drawn up for the ministry in France, contains all that is calculated to interest and to inform our profession in England—engaged, as all minds now are, on the sundry plans of medical reform which have been proposed, and at the moment when that Parliament is already assembled which will probably settle in one way or other the conflicting propositions of our medico-political parties.

The publication of the subjoined semi-official paper will be beneficial in one point of view more particularly. It is a well-known, and it must be confessed rather a whimsical, characteristic of the people of this country, to be constantly grumbling, and appealing to things foreign as better managed than their own — though fortunately seldom adopting them, except when some solid reasons seem to support and recom-

mend a change. Now it has so happened that, in the discontent which has prevailed for some time relative to the state of our medical institutions, the lovers of innovation have perpetually been appealing to France—in the shallowness (it is but too evident) of their acquaintance with other foreign systems. They know not, and they scarcely seem ever to have inquired, whether any other plan of professional arrangement and education existed in the world. We have from time to time exposed the worthlessness of the objects in the system of our Gallic neighbours which served to form the chief topics of admiration among some at home; and not seldom have we had occasion to expose the ignorance betrayed in the frequent reference made by certain parties to French Faculties and Schools. It may not now, perhaps, be amiss, if we take a brief survey of the proceedings of the reformers of education in France, as we shall thus have the better opportunity of contrasting with them the more sober, steady, and valuable measures, taken in Germany to attain a similar purpose.

The present system in France, both with respect to education and the state of the profession there, such as it is, cannot be traced back farther than about forty years. It is the child of the first revolution; it was raised upon the ruins of all the institutions overturned by the *National Convention;* a *tabula rasa* was formed, and a gaudy pile was erected, which flourished for a time; but having within it the seeds of anarchy and instability, has never ceased during the short period of its existence to be harassed with continual commotions. A fundamental ordinance of the revolutionary arrangement was, to make all the authorized teachers pensioners of the state, and to secure for the state an ultimate voice in their appointment: hence the arbitrary and despotic measures frequently adopted, of dispossessing able professors of their chairs, upon every change that occurred in the political aspect of affairs.

Owing to these circumstances, there has been for many years in France a large opposition party—never, perhaps, more strong and violent than at the present moment — whose great object it is to procure the free and unfettered privilege of teaching medicine; that every man who chooses may be allowed to exercise his talents, and depend upon his merits for the success of his exertions; in a word, that the interference of government with the medical schools shall be altogether abolished.

What a contrast, by the way, does this afford—we should, perhaps, rather call it a contradiction—to the conduct of the ultra-liberal party among ourselves, whose great object is, not to have education left in its present free and unfettered state — the *beau ideal* of the French levellers—but to have it subjected to a unique Faculty or Academy, with a minister of public instruction—an agent of the government — at its head!

The editorial writer of a respectable French journal * sets this contrast between the rival reformers in a strong point of view:—

"Voyez ce qui se passe aujourd'hui dans les deux pays les plus civilisés du monde: tandis qu'en France on s'élève contre les institutions établies sous la république, qu'on les nomme des priviléges, des abus, et qu'on voudrait voir l'etat indifférent a tous les essais possibles d'education, *en Angleterre* on fait tout pour obtenir que le gouvernement intervienne dans l'instruction publique: *la nation anglaise* voudrait que son administration assûmat sur elle cette grande responsabilité de l'enseignement."

But the writer suffers himself to be deceived by his own partialities: he is a supporter (a placeman, too,) of the

* Journal Hebdomadaire des Progrès, &c.

government system of education, and is therefore glad to find some advocates of the plan in England; he must not, however, assume that the *nation anglaise* is represented by the orators — the little "tritons of the minnows" — in our debating societies. The English "*nation*," we can inform him, wishes its professional establishments to be as free and independent as its other institutions: it asks the interference of the government to remove abuses indeed, but the spirit of its ancient and congenial freedom it will never but by strong constraint abandon.

As to the state of the profession in France — that it is destitute of the *élémens de durée* (which are claimed by the same writer, we think, erroneously, for the educational system there,) is sufficiently apparent from the "project" which has been on the *tapis* for several years, and recently more particularly brought before the public with a view to put medicine on a settled and respectable foundation. So that with all the supposed advantage of setting out on the true revolutionary principle of "levelling down" all the old establishments bequeathed by the wisdom of their ancestors, and erecting a wholly new and immaculate system, the result has after all been little short of complete failure; at least nothing possessing the elements of stability and harmony has been produced; and we may now reasonably and fairly presume to find our French brethren speculating on changes — reforming — and revolutionizing, to the end of the chapter. And yet this is the model which our sapient Faculty men would propose for our imitation!

Now let us see what the example of the German nation affords us. Nobody will say that Prussia—despotic as that government is—had not ample opportunity in its late reforms, touching the state of the medical profession and education within its boundary, to set out, if it thought fit, with a *tabula rasa* also; and to produce a state of things wholly new—to imitate, if it deemed it prudent, the "*grand and admirable*" model of the French. But no; it has not so seemed good to the prudent monarch, Frederick William: he took the advice of his learned councillors; he availed himself of the safety which is borrowed from experience; he reformed, and with no sparing hand; but he did not level, nor revolutionize. The sagacity of Prussia, in this respect, is universally acknowledged, though the particular nature of its measures in the disposition of its professional schools and grades is as yet but imperfectly understood in this country. With this consideration borne in mind, we entreat the reader to cast his eye over Rust's sketch of the reformed arrangement, in a subsequent page, and he will see what precedent is there afforded (for this is a point that we are anxious to settle) for *an equality of rights* and *an equality of rank* in medicine. Let our levellers peruse it, and hide their diminished heads, when they see the amount of qualification that would entitle them to belong even to the lowest grade of the profession in Prussia.

Medical reform in the Prussian states has been the result of successive improvements made on tried systems; and the present may be looked upon as the third great change that has taken place. In the year 1725, an edict was passed which regulated the profession suitably to the state of knowledge and of society at that date. This arrangement continued till near the close of the last century, when the advances of science and the exigencies of the times demanded a change. A suitable reform accordingly was effected in the year 1798; but such has been the giant pace of the medical sciences, and such the altered relations of society since then, that a great and

comprehensive reform was again necessary in the year 1825. It is of this latter change and its consequences that Dr. Rust writes; and it is satisfactory to find that we have the testimony of that distinguished and learned physician to the fact, that the new arrangement of which the chief details are now before us, has worked well—and that it has already, in more than one place, been attended with the happiest results.

One of the most striking features of the Prussian system of arranging the profession is, the strict line of demarcation which defines the privileges of each grade, and the boundaries which limit the field of each class of practitioners. Neither the surgeons can meddle with medical practice (for it is idle to say, as some in this country do, that a practical boundary *cannot* be drawn between medical and surgical practice), nor the physicians with surgical, unless certain regulations have been complied with; although both physicians and surgeons are perfectly on a par as to the *principles* of medical science—the former having, in addition, gone through a four years' University course, terminated by graduating in arts. Another excellent provision is that which requires accoucheurs, oculists, and even dentists, &c. to be qualified and admitted physicians or surgeons. An effectual blow is thus given to the devices and expedients of quackery, no man being allowed even to practise as a dentist (for example) unless he superadd the knowledge requisite for that branch, to his regular qualifications as a medical practitioner. How different is this from the English or French system, neither of which take any account of the innumerable charlatans in "dental surgery," who infest both Paris and London with their incorrodible pasty nostrums; or the quacks on the eye and ear, who inundate either country with their puffing and lying advertisements! But we refrain from offering remarks which must suggest themselves to every reader who looks at the paper of Dr. Rust.

It may probably be asked us, since we seem to speak of the German plan of reform in such terms of commendation, whether we should like to see it adopted in this country? We answer, unhesitatingly, no; because we do not consider it as suited to the genius of the English nation. We should desire to see its principles adopted to a certain extent—in maintaining distinctions, and in regulating, improving, and fixing the requisite education. We may gather materials from it for our design, but we need not copy. There is an air of liberty that must be preserved in all our institutions, and without which they cannot subsist; nay, the very attempt to deprive them of which, would by general acclamation be denounced as unconstitutional. Such a spirit we shall always rejoice to see combined with the medical establishments of England—imparting to them that life and energy which have so materially contributed to place the profession in Great Britain on a higher footing than it enjoys in any other part of the world. But since there are many and serious abuses which have crept into our existing establishments,—defects that render them unsuited to the condition of the age,—and since reform, in some shape, we trust, will be effected,—we confess that in such an emergency it is both natural and prudent to look abroad for examples, and to guide ourselves by the experience of our continental brethren. We turn our eyes, however, with far more complacency to the steady measures successfully adopted by a people who have in their habits so many points of strong affinity with our own, than we do to those chimerical and restive schemes by which French reform—or rather revolution—has been characterized. It is better, we should think,

if we are to copy at all after a foreign fashion, to imitate the system which has been matured by the experience of above a century, and deliberately but totally improved upon each occasion with express reference to the wants of the age, than to "fly to evils that we know not of"—to grasp at the ever-changing, never-settled state of things in France, where, forty years ago, no schools nor medical institutions existed, and where, as we have often shewn, nothing pre-eminently desirable has ever since found a resting-place. Applied to us the Prussian system will be found much more *german* to the matter. It is unluckily but too much forgotten by our *ultra*-reformers, who look across the straits of Dover whenever they want something to put in the place of what displeases them at home, that there is little of a kindred nature between the two neighbouring and rival countries; and that the vein of nationality which pervades the institutions, medical as well as political, of each country, is not more distinct than the vanity with which the one rejoices in the appellation of "*young* France," and the proud spirit with which the other clings to that of "*old* England."

ON THE

CLASSIFICATION OF THE MEDICAL PROFESSION IN PRUSSIA;

WITH AN

Account of the Qualifications required by the Prussian Government from the various Classes of Medical Practitioners.

By Dr. J. N. Rust,

Knight of the Order of the Red Eagle, Minister of the Medical Privy Council, Physician General to the Prussian Forces, Professor of Medicine in the University of Berlin, &c. &c.

A proper code of regulations, touching the requisites for each and every class of medical practitioners in the Prussian states, had long been a desideratum, for that of 1798 had wholly ceased to be adapted to the object in view. It was evident that no plan of reform could be effectual that would not comprehend such a distribution of the persons engaged in the practice of the medical art, and of their rights and privileges, as would be suited to the demands of the age, the state of science, and the actual wants of the community; and it was admitted on all hands that no just or equitable system of arrangement could be established that would not have for its basis the local destination of the candidate, and the privileges to which he should prove himself entitled by examination.

But neither the existing classes of practitioners, nor their respective privileges, were suited to the actual state of medical science, or the necessities of the population in town or country; for by the medical edict of 1725, which was still in force, the various grades of the profession were vested with such rights as were only suited to the state of education and science a full century ago. Since that date, it is almost superfluous to mention, science has made such gigantic progress, the whole system of medical education has undergone such a change, and the standard of the qualifications for medical practitioners has been raised to such a height, that the legally-established forms could scarcely, in any instance, be observed without producing the most palpable inconsistencies.

Previous to the reform of 1825, the following were the principal divisions of the profession in Prussia:—

1. Graduate practising physicians, who were only allowed to treat inward complaints.

2. Graduate practising physicians, who were also operative surgeons, entitled to practise both in internal and external maladies, and in town as well as country.

3. Practising physicians, who were licentiates, but not graduates; these possessed in every respect the same privileges as graduates in physic and surgery.

4. Surgeons practising in towns, who, having undergone the same examination as each of the three preceding classes before the chief examining board in Berlin, were privileged to settle in large towns, the population of which might be 10,000 or upwards; but they were only to practise pure surgery.

5. Surgeons for the country, who were examined by the provisional colleges on a smaller quantum of scientific and practical acquirements; but they were only privileged to settle in villages or small towns.

Both the preceding classes of surgeons were forbidden to meddle with inward complaints, except in some special instances, when they were allowed to treat simple medical cases, there being no practising physician to be had in their vicinity.

or within three miles (*eine Stunde*) of them; and even then, not unless they had given proof of their competence by a special examination before their provincial medical board. But though they obtained this privilege, it was taken from them again whenever they changed their residence, or a practising physician came to settle in their immediate neighbourhood.

6. Dentists, from whom, at their examination, no proofs were demanded, either of an elementary education, or of a knowledge of anatomy and surgery, so essentially requisite for the business of a dentist; yet these were permitted to settle where they pleased, or to travel through the country in quest of practice.

7. Military physicians, who constituted a class endowed with peculiar privileges, but burdened with special restrictions; for they were obliged to go through a certain stated course of medical education, and underwent a particular form of examination, with a view to their destined medical appointment; but with all this, they did not obtain any privilege as practising physicians or surgeons: whatever civil rights they enjoyed depended more on their standing as military medical officers, according to certain government regulations, than on their knowledge and ability.

In such an arrangement of the several orders of practitioners, it was universally felt that the following were among the chief points requiring reform:—

1. That with regard to the class of graduate practising physicians, no inquiry was entered into as to their possessing an acquaintance with the pathology and therapeutics of *surgical* complaints—nay, that they were admitted to practise, and might even receive appointments as forensic physicians, without having ever attended a course of lectures on surgery, midwifery, or other requisite branches.

2. That surgeons were admitted to practise purely as such—nay, to perform capital and dangerous operations, and even to receive appointments as medico-legal surgeons, without having ever undergone any examination as to the requisite acquirements.

Most properly were both these points acknowledged to be inconsistent with the actual state of science; for no man can be an adequately qualified practising physician, still less a medical jurist, if he has not simultaneously studied surgery,—at least its leading principles,—and pathology likewise; and unless he have made himself perfectly familiar with the diagnosis of surgical diseases. But even less still is it possible for a surgeon to be a complete man of business, and a skilful operator, unless he possess the knowledge that is required of the practising physician. There is but *one* nature—there can be but *one* medical art: and the one is just as little divisible as the other. Physic and surgery are only departments of one and the same science; and surgery can neither be learned or taught, much less practised, without a knowledge of physic. The distinction between them is only subjective, not objective, and consists, therefore, not in a difference of theory, but of practice. But every medical practitioner is not required to act as a surgeon; nay, a man may be a very learned and successful practising physician, yet be wholly incompetent to perform an operation: in every case, however, the physician ought to know when, where, and how a surgical operation should be performed. Further, surgeons themselves may want the ability, some to perform capital operations, others those delicate and difficult ones (on the eyes, for example), which require peculiar dexterity: hence it was a defect in the old system,

3. That every surgeon who was examined by the commission board obtained the title of operator; and even those who had been only tested theoretically before the Royal Medical Colleges, were privileged to use the surgical knife at pleasure, without having previously given any practical proof of their competence in this respect.

4. The admission of such a class as that of licentiates, not graduates in medicine, yet placed on exactly the same footing as to privileges, had long been acknowledged as a great oversight of the old medical administration; for under this system it was perceived that the students were but too frequently induced to neglect the higher branches of medical study, and to learn nothing except what was suited for the purposes of trade (*Gewerbe*), and that the cultivators of science were necessarily becoming more rare, and in danger of disappearing altogether.

5. The division of surgeons into those for town and those for country, was recognized as another essential fault in the old system.

It is abundantly clear that no distinction between surgeons, as to higher or lower grade, ought to be grounded on their supposed competence for practising in large or small towns, but solely on the privileges to which they may shew themselves entitled on account of the studies they have gone through, and the more or less extensive examinations they have passed. There was also this awkward consequence attending such an arrangement, that in the great towns, where alone the pure surgeon could live, there was a want of hands for the performance of the minor surgical business, whilst the country was obliged to put up with

the most ignorant, or at least the most imperfectly-educated, class of practitioners. Besides, should one of the latter class in a large town overstep the limits prescribed to him, he can be overhauled by somebody better qualified: any error he may commit is immediately set right; and at all events the patient is not left depending on him. In the country, on the other hand, such a surgeon is all in all—physician, surgeon, operator, accoucheur, and among other things, perhaps apothecary also. He has ample opportunity for making experiments in every department of medicine. It is true that medical practice in general is forbidden him, but the people in the country are regardless of this, in the dearth of other and better practitioners. He could not, however, if he would, live as a mere surgeon in the country, for he has fifty medical cases to treat, for the one surgical that falls in his way: so that he is obliged, whether he will or not, to practise medically;—his own, as well as his neighbours' necessities, constrain him to it; and no prohibition can order it otherwise.

Taken in another point of view, it was not to be misunderstood that this humble class often consisted of men who, partly by the dint of continual empiricism, and partly through whatever instruction they had acquired in the schools, arrived at a right good practical tact, with which they had rendered the country people very profitable service. Now, when a person of this sort had raised himself to so much usefulness; there being no complaint against him; his patients perfectly content with him, and unwilling to do without him; such a practitioner was suffered to work away undisturbed in the field which he had earned by his exertions. The law looked through its fingers at him, and the state was even rather pleased to find that the country people were in such safe hands. This state of things usually went on until some doctor or licentiate fresh from the schools, and wholly destitute of experience—by virtue of the laws that existed, and in spite of the feelings of the people—drove out the favourite practitioner, depriving him of the circle of practice in which he had so successfully operated for perhaps twenty years or more.

It was consequently perceived to be another glaring defect of the old system,

6. That every young and still inexperienced medical man should have it in his power, in consequence of having acquired a higher privilege, to eject from his practice every surgeon without exception—even him who had given proof of his competence for the treatment of medical cases.

7. And in fine, it was allowed to be a serious fault, that the military medical men, an isolated class of the profession, should enjoy privileges and labour under restrictions which fell to the lot of no other order of practitioners. It was properly observed, that any peculiarities attaching to these officers were simply external, and that the distinctions theretofore made between civil and military medical men were destitute of all rational ground. A man may be just as good a military as a civil medical officer, without the particular service of either, *cæteris paribus*, elevating the one, or preventing either from belonging to one and the same class in the profession.

Now, in order to remedy these multifarious defects, it was proposed to adopt such an arrangement as that for the future:

Neither physicians nor surgeons should be admitted to practise, who had not sufficiently given proof of possessing all the requisites suited for keeping pace with the actual state of science; nor until they had been examined as to their proficiency in both departments (medicine and surgery), always with a view to their contemplated range of practice.

A distinction should be positively made between the admission of a surgeon and an operator.

The order of licentiates, or physicians without degrees, should be altogether abolished, or rather their privilege should be transferred to well-educated surgeons with certain well-marked restrictions, and upon proofs tendered of their competency. Whilst, on the other hand, certain prerogatives should be still further enlarged for the graduate, in order to keep up and promote among students the ambition of attaining the higher and more learned accomplishments of medical science.

The division of surgeons, according to certain localities, should be entirely done away with; a better instructed and a more multifariously-qualified class of practitioners should be afforded to the country people; while to the actual country surgeons there should be allowed, a more restricted indeed, but still a competent and more extensively-large circle, of professional utility.

The military class should be arranged according to the various scientific and practical acquirements of the individuals composing it: in fact, they should be put on exactly the same footing as the civil class, any distinction made being founded wholly on studies and examinations.

Such were the requisites which it was sought to supply by the proposed reform. The legislative measure for the purpose was duly brought forward by the Ministry for Ecclesiastical, Educational, and Medical Affairs, and received the Royal sanction on the 28th of June, 1825. A new era for

the profession in Prussia was thus begun, and the working of the system has ever since been attended by the happiest consequences.

We shall now proceed to give an account of the existing arrangements of the profession in Prussia, and of the rights and privileges belonging to each class of practitioners.

The medical profession in the Prussian states is divided into the following orders:

I. *Graduate Practitioners of Medicine.*

This, the highest class, comprehends two subdivisions; —

1. Those who are graduates in surgery as well as in physic, and who thus unite in themselves whatever the medical art embraces in its entire extent. They are physicians and surgeons (*chirurgico-medici, chirurgiatri*), or physicians and operators together. And in order to attain this rank, they are required,—

(*a.*) To have regularly taken their degrees as doctors of medicine and surgery. The term *regularly* here implies that the person shall have obtained the doctorate, after having in the first instance given proofs of a sufficient school education; then by going through a four-years' curriculum in a University, commencing it with a *Tentamen philosophicum*, passing an examination before the faculty, and in conclusion, defending publicly an inaugural dissertation composed in Latin by himself. Then he shall shew that he has gone through with success, (*b.*) The required courses of anatomy; (*c.*) Akiurgy, (mechanical or operative surgery); (*d.*) Clinical surgery; (*e.*) An examination on clinical medicine, conducted in the Latin language; and (*f*) The oral final examination, that for the diploma; the extent of this trial takes in the whole range of the healing art.

Having complied with all these requisites, the candidate takes the oaths, and receives his diploma; and he thus becomes entitled to turn his acquirements to account, by exercising the medical art in all its branches. The minor surgery alone and minor offices, graduates of this high order, are obliged to relinquish for the benefit of the pure surgeons in those places where such are settled; those cases, of course being excepted, where the occurrence of delay would be dangerous.

Whether the practitioner belonging to this class shall or shall not have the additional title of operator, depends chiefly on the result of his akiurgical and clinico-chirurgical examination.

2. Those who are graduate practitioners of medicine only (*medici*). These are confined to the practice of inner medicine (*innere Heilkunde*); but they are by no means allowed upon this account to dispense with a knowledge of surgery: they are only not permitted to practise it, nor are they required to give proof of their practical ability in this respect.

To obtain the diploma of a practising physician of this class, the candidate must shew, (*a.*) That he has regularly graduated as a doctor of medicine; (*b.*) That he has gone through with success the anatomical course; (*c.*) The clinical-surgery examination; however, with reference only to the pathological part of surgical diseases, omitting the operative detail; (*d.*) The clinical-medicine examination in Latin; and (*e.*) The oral concluding examination, in which the candidate shall be examined, among the rest, on the nature and treatment of surgical diseases.

The persons who belong to this order of the profession, comprehended under the two preceding subdivisions, besides the privileges already mentioned, are alone qualified for appointments as medical officers of state, from a chief medical privy councillor down to a physicus, provided they have previously given proof of the requisite knowledge in midwifery, have performed their medico-legal exercises with approbation, and have gone through the stated examination for the physicate. It is also only graduate practitioners of medicine who are eligible to the higher medical professorships; and in the military medical service, it is only those who belong to the first subdivision who may obtain the higher professional appointments, from staff-physician-general down to regimental physician.

II. *Surgeons of the First Class.*

These are medico-chirurgi, or iatro chirurgi, who have not taken a degree. Individuals of this order must possess the requisite knowledge for treating inner as well as outer maladies, according to the precepts of the schools. They must, therefore, in order to be admitted to an examination, and to be qualified for their diploma, shew (*a.*) by gymnasial certificates, or a preliminary tentamen, that they possess the requisite general elementary knowledge, and at least so much Latin as to be able to translate the Pharmacopœia and some easy author, and to write a prescription correctly. Further (*b.*), they must shew either that they have gone through a regular three-years' medico-chirurgical course, and have obtained the requisite practical ability from clinical instruction, or that they have attended the prescribed courses of lectures, and have for the same length of time, at least, acted as assistant-surgeons in a military or civil capacity. Then they must have gone through, with success, (*c.*) the anatomical

course, (*d.*) akirurgy, (*e.*) clinical surgery, (*f*) the medico-clinical examination in German, chiefly touching acute diseases, and of a purely practical tendency; and (*g.*) the oral final examination for the diploma, which shall be as well on medical as on surgical and pharmaceutical subjects.

Whether they shall obtain the additional title of operator, depends on the issue of their examination in practical and clinical surgery. But the privilege of medical and surgical practice accruing to this class of surgeons, depends on the following external circumstances. It is only when they choose to settle in a place where there is not already a graduate practising physician, that they may practise medically: but the privilege continues with them, although a graduate may subsequently come to settle in the same locality. If, however, they wish to practise in large towns, or where there are already graduates residing, and there be no need of a medical assistant, they are then only allowed to treat surgical cases, and purely medical practice is forbidden them. An exception is made in favour of those surgeons of the first class who hold military or civil appointments—such as battalion physicians or district surgeons; to whom, in consideration of their not being at liberty, in the first instance, to choose their own locality, it is conceded to practise medically as well as surgically, in all places wherever they may be, and as long as they are in the service of the state. For the rest, the surgeons of the first class are bound, in cases of consultation, to pay due respect to the opinions and suggestions of the graduate doctors.

Surgeons of this class being appointed chiefly with reference to their practical utility, with a view to the supplying, by their means, the country folk and inhabitants of small towns with proper medical assistance, are alone held eligible to appointments as district surgeons, when they shall have previously obtained a midwifery license, and passed successfully the medico-legal examination;—as also they may be promoted to the office of surgical assessors in the medical colleges, to district pauper surgeonciesto be assistant-physicians and surgeons in hospitals, and, in the military service, battalion, garrison, and government staff surgeons.

An objection has been made to the introduction of this class of the profession (which has, in point of fact, proved itself to be the most truly useful, perhaps, of all), that, 1. there is thus provided for the people in the country a less competent class of medical practitioners than for those in town; 2. that when these surgeons are held competent for internal practice, it is unfair to refuse them the liberty of practising medically in large towns; and, 3. that the well earned privileges of the graduate doctors are prejudiced and injured. All this, however, is founded in mistake. The surgeons of the first class, though only allowed the title of surgeons, are just as competent for universal practice as the graduate doctors. It is not the proof of their acquirements adapting them for universal practice that is remitted to them, but that learned education requisite for the cultivation of science: besides, the examination required of both is exactly the same. It is not to be denied that a man may be a very useful and most successful practising physician, without having any pretensions, at the same time, to a learned education, or being competent to promote medical science. On the other hand, our most learned physicians, the heroes of science, are often not the best practitioners: one may thus be both a learned and a practising physician, but also either separately. So far, then, as mere ability for inner practice is concerned, there would be no reasonable ground for refusing to surgeons of the first class the right of treating medically the dwellers in large towns—a right which is enjoyed by surgeons of the same class when in official situations.

But the object was to provide the country folk and inhabitants of small towns, who were so frequently destitute of genuine medical assistance, with a better instructed and more variously accomplished class of practitioners than they had under the old system; and for great towns, where professional labour can be liberally remunerated, to secure the required supply of authorized assistant-surgeons, and thus again to put a stop to the bunglings of the mere barbers. For this reason, it was necessary to lay down certain restrictions for surgeons of the first class, with regard to their practising medically; such as that they were to be recognized as medical practitioners only when there was a lack of that class—because they would otherwise (like the licentiates, their predecessors) take good care not to settle in the country, where they would have less profitable and far more arduous duties imposed upon them than in town.

The objection, then, that it is unjust to forbid this class medical practice in large towns, at once disappears. It is only to the surgeon of the first class who is in the service of the state, that this privilege can be permitted; because, otherwise, such an individual suffering a greater loss by the prohibition of the privilege of inner practice than the gain that accrues from his very parsimonious pay, would gladly remain unattached to the service, and the state would soon find itself constrained to fill up its appointments with an inferiorly qualified class of surgeons; and that, too,

in the large towns themselves. And, in reality, the country, as well as the military service, requires a class of professional men specially qualified for the duties. The graduate doctor, if he be not at the same time a surgeon, can be as little serviceable in military service as in the country, and, in general, cannot get a livelihood in the latter without some official appointment at his back. Neither his taste for intellectual society, nor his endeavour to keep pace with the advancement of science, nor the pretensions which he can reasonably make to a better way of living, can here find their contentment. By the multiplying of graduate doctors, the towns would be overstocked with them, whilst the country would remain unprovided with the requisite medical aid; as the experience of various inland parts can testify. Now this defect could only be remedied by the introduction of a suitable class of practitioners, who, by reason of an inferior scientific education, a less expensive mode of attaining their professional standing, and by reason also of the lower condition of life from which, for the most part, they are sprung, have thus fewer demands and less pretensions to affect a station and rank in society. For the rest, it remains undeniable, in spite of the many objections urged to the contrary, that the country physician, like the military physician of lower rank, requires no such great extent of scientific attainments for the sort of inner medicine which falls to his share: not so extensive, at least, as the practitioner in town. The whole host of chronic and acute disorders which are introduced by a sedentary life—by the refinements of cookery,—by the ever-varying fashions in dress,—and by the luxurious habits in towns—are only of rare occurrence in the army as well as in the country. A more uniform way of life, similarity of occupation, and in part an equality of age, give room for a more uniform appearance in the complaints, and preclude those endless complications which are owing to the influences just alluded to. And in addition to this, the physician in a great city must have acquired, besides his professional knowledge and experience, an abundance of general knowledge and maxims of life, if he wishes to move in the higher circles of society, and to inspire confidence in his skill. All which are no ways essential for the country practitioner.

In fine, as to the objection that by introduction of surgeons of the first class, the well-earned rights of the graduates are prejudiced, the repetition of what has been said must be a sufficient reply—that this is the case in a much less degree than it formerly was, when ungraduated physicians (the licentiates) were permitted to practise; for they possessed, in every respect, the same rights and privileges as the graduates did. Moreover, the interests of the profession were much less to be considered in the arrangement than those of the sick, who wanted medical aid and had none. Yet with all this, the doctors, so far from having actually lost by the introduction of surgeons of the first class, have in reality gained by it; for there has resulted from that step a more uniform distribution of medical practitioners, and a limit has been set to their superabundant influx in large towns. By the simultaneously introduced difficulty of accomplishing the University course—by the perfecting and extending of the higher medical curriculum itself—and by the severity of the subsequent examinations for attaining the doctorate—the number of graduates has been very much diminished. Each person who, at present, can only reach the rank of surgeon of the first class, could, on the old system, have graduated, as competent for inner practice; or he went through the examination for the licentiateship, and then took his degree into the bargain, without, after all, possessing more acquaintance with the science of his profession than does the present surgeon of the first class. Only the name and the privilege have been altered, not the thing itself. Thus, by the introduction of surgeons of the first class in the Prussian States, there has not been one more practising physician added than there would have been without this class; and only the number of *unlearned* doctors has diminished in proportion as there has been a vent opened for them among the first class surgeons.

III. *Surgeons of the Second Class.*

The candidate who wishes to obtain a diploma as surgeon of the second class, must shew either that he went through the education and apprenticeship prescribed by the medical edict of 1725, or that he had been a military assistant-surgeon at least for three years, or that he had obtained the knowledge and expertness requisite for a surgeon of the lower rank, by the regular attendance of public places of instruction. In the latter respect the candidate must prove that he has gone through with success a complete (three years) curriculum in a native medico-chirurgical establishment (School of Surgery). Yet will certificates of other lectures, attended even in foreign establishments, be admitted as valid, among which, however, those on bandages and the use of instruments, on fractures, and luxations, on operations, and surgical clinic, cannot be dispensed with; and together with which it must be also made to appear, that the candidate attended the said clinic not merely as a hearer, but as a practical assistant;—that he per-

formed dissections, and took part in the practiec of operations on the dead body, and on models *(Phantome)*. With these testimonials, the candidate will be admitted by the Medieal College of his provinee to an examination, which is to be completed in four terms.

In the first term, three problems will be proposed to the candidate for written answers, taking care to prevent the possibility of his employing the assistance of another person; these questions to be drawn by the candidate himself out of an urn, from among a number of not less than thirty, and relating particularly to general subjeets of physiology, materia medica, and ehirurgica, the art of prescribing, the mode of attempting the recovery of the apparently dead, the needful offices for persons bit by mad dogs, poisoned, or in danger of sudden death.

In the seeond term, the candidate must give a proof of his anatomieal and surgieal attainments, both by demonstration and practieally, on the dead body, when it is possible—but when there is a want of subjeets, on anatomieal preparations and models.

In the third term the eandidate shall be brought to the bed-side of the siek, when he shall have several surgical eases set before him, the diagnosis of which he must immediately point out; and he is examined respeeing their eauses, eourse, and proper treatment. Also the eandidate must display, praetically, on the living body, his mechanieal eleverness in getting ready and applying the dressings in various forms of disease; also, when it is possible, and the oeeasion may happen to present itself, he shall perform several of the minor surgical operations.

In the fourth or eoncluding term, the candidate shall be examined by three Fellows of the College, orally, on all the departments of practieal surgery, with, however, a constant view to the future destination of the candidate.

The proceedings of the examination, with the proposition for the admission or rejection of the candidate, is then sent in to the ministry for their ultimate decision.

Those eandidates for examination who, in their examination for surgeons of the first elass, have not displayed sufficient professional knowledge, but have nevertheless exhibited the requisite practical cleverness, can only obtain diplomas as surgeons of the seeond class.

Although surgeons of the second class are authorized, and have proved their eompetenee to treat surgieal diseases independently, they are yet ealled upon to perform various surgical offiees for the sick—bleeding, leeching, scarifying, bandaging, &c.—at the bidding of the physicians and the superior class of surgeons; and in this respect are rather to be looked upon as assistants than as independent surgeons. They may in this regard also settle where they please, even in great towns, where they can, in the latter respeet alone, obtain an extensive sphere of action, suffieient for their maintenanee. On the other hand, medical practiee, or the treatment of purely medical eases, is uneonditionally prohibited to them; and they are also held responsible for the performance of capital operations—those cases excepted where delay would be productive of mischief, and the assistance of a surgeon of superior rank is not to be obtained.

Dentists.

With the second class of surgeons, *dentists* take their rank—that is to say, provided they do not already belong to a higher elass, but are privileged solely for the practiee of dentistry. Such practitioners must be examined by the medieal Colleges in three terms—by writing, word of mouth, and practieally—on anatomy and physiology, the pathology and dieteties of the teeth, on diseases of the teeth and gums, on the effieaey and mode of preparing dental medicine, and on the indications for performing the several operations on the teeth,—along with which they must at the same time shew the praetical knowledge they have acquired in preparing eertain artificial teeth, and whole sets of teeth, as well as in all the mechanical parts of dental surgery, and the applieation of the various instruments. For the rest, nobody can any longer obtain the diploma of a dentist, or be even admitted to an examination on dental surgery in particular, who is either not already a physieian or a surgeon, able to tender the requisite proof of his having attained the technieal and mechanical readiness so essential for a dentist, or who, if he have not been already admitted as physieian or surgeon, eannot at least shew eertificates of his having diligently attended lectures on anatomy, general and speeial surgery, teaching of operations, materia medica, and surgieal clinic.

Accoucheurs.

The eandidate who seeks to be admitted to examination as an *accoucheur*, must, besides all the other tests (he must have been already admitted as a physician or surgeon), shew that he has gone through a eomplete theoretical and praetical course of midwifery, and that he has managed at least two births by himself.

Oculists.

To the examination for *oculists* those physieians, if they please, are admissible, who are not surgeons, but who wish to practise this branch of operative medicine in parti-

cular. The want of a particular form of examination for oculists was very properly denounced as a defect in the old system of regulations. Whoever was already admitted as a physician, or operative practitioner in general, was not required to undergo any further test of his ability as an eye operator; but there are physicians who shall know nothing of operative medicine generally, nor possess any of the requisite qualities for its practice, who yet may have a taste for ophthalmic surgery in particular, and for the operative tact which is adapted to it. The greatest oculists and ophthalmic surgeons of our age, Barth, Schmidt, Beer, Proehaska, Himly, &c. were not surgeons in the general sense, but eye-operators only; and I need scarcely add how much eye surgery has been indebted to them for the great advances which it has made of late, and whereby it has been raised far above several other branches of general medicine. An especial examination for those physicians who had not been admitted as surgeons, but devoted themselves particularly to eye diseases, and who were desirous of performing the operations that came in their way, was therefore deemed not only necessary, but an essential means of advancing the interests of eye surgery in the state.

State and Forensic Physicians.

To the examination for state medicine, and as a forensic physician (the test for the physicate), only those physicians are admitted, who are graduates in medicine, and pre-eminently the most distinguished, and the most multifariously accomplished of their order; nor shall they be admitted until they have discharged their professional duties already for a considerable time — have distinguished themselves as scientific physicians—have earned a high reputation—and who enjoy the confidence of their patients, as well as the esteem of their brother practitioners; and who, with all, have previously been examined as accoucheurs. Requests to be admitted to the examination for the physicate, and thus to become eligible and competent to medical offices in the state, must be made to the ministry, through the royal regencies, whose sanction is further requisite. In like manner, none but surgeons of the first class, and (by an exception in their favour) the *ci-devant* surgeons of large towns, shall be admitted to the examination for medico-legal surgeons, — and that, too, after a previous examination in midwifery.

Together with the preceding arrangements, with a view to prevent any evasion of the legal provisions, it was established, that —

1. All Surgeons, who have been already admitted as such, or who shall be so hereafter, by the national medical faculties, unless they have an express recommendation in their favour from the Ministry for Medical Affairs, shall be ever after excluded from the doctorate; and in case the degree should be conferred upon them by a national or a foreign faculty, such surgeons, on a pain of forfeiture suited to the case, shall not assume the title; and further, that —

2. When the doctoral title is obtained supplementally and by exception, through the aforesaid ministerial approval, the surgeon can by no means enter the higher grade of graduate doctor: much more in such than in other cases, the complete compliance with all the requisites of the examination laid down for the class in question is necessary, in order to be able to obtain a new admission.

When the foregoing classification of the profession was published, with a view of putting it in force, it was laid down, that—

1. The actual condition of the already-admitted practical physicians (although, as not having graduated, they properly now only belonged to the grade of surgeons of the first class,) should not be disturbed; but that one and all should remain exactly as they were originally settled.

2. The surgeons for large towns, though they ought now only be reckoned as surgeons of the second class, yet maintained the right to qualify themselves as medico-legal surgeons, and to be allowed to canvass for district surgeoncies; while, however, the limited privilege of surgeons of the first class, with regard to medical practice, was only permitted them when they had submitted to, and successfully passed, the supplemental examinations required for the purpose.

3. Those surgeons who had been appointed to villages and small towns — though they had undergone a far less rigorous and extensive examination than that for the second-class surgeons — yet were adopted into this class; and even the privilege of settling in large towns was not denied them, provided their doing so was desirable for the sake of their services in performing the minor surgery, and that the place was not already overstocked with practitioners of the same order, or that, in fine, the still occasionally existing privileges of the surgeons for towns did not militate with their purpose. But the privilege hitherto necessarily belonging to this class, of treating minor medical cases, ceased altogether as soon as they changed their residence, or a medical man, properly qualified, came into the same quarter, or its immediate vicinity.

Thus, then, has the old state of things been completely altered, and the new system brought into effect, without prejudice-

ing the vested rights of any one. The medical doctorate, which was heretofore too liberally conferred in Prussia, has been restored to its original higher importance,—a more scientific impulse has been communicated to the youthful votaries of Esculapius,—an improved system of professional education has been adopted,—and new schools, and an abundance of institutions, have been established, altogether conducing to the advancement of science, and much to the relief of suffering humanity.

It will happen, of course (putting the writer's views and possible motives out of the question), that different persons shall support different opinions regarding particular parts of the present state of things, and shall maintain that those parts might have been otherwise better arranged; but let them not misunderstand the design, the tendency of the whole, the utility,—which has indeed already been happily attained. It is hard to contend with old enlisted prejudices, still less is it possible to please every body; and least of all, those who have felt themselves rather trenched upon in the changes, and who have been obliged to contrtibute somewhat—to offer a mite, however small, towards effecting the general object. In conclusion, let it be recollected that that object was not the founding of a sanitory system, or a complete reorganization, but simply a sufficient reform of what already existed, wherein old-established rights and institutions were to be—so far as it was possible and consistent with the end in view—respected and spared. The writer is perfectly willing to confess, that were the task committed to him of organizing a system where none already existed, he would probably proceed upon principles totally different from those which have been here detailed.

[For the preceding paper we are indebted to the *Medicinische Zeitung* (Medical Gazette) of Berlin, edited by Dr. Heeker. Those readers who wish to become more intimately acquainted with the Prussian system, will do well to consult Dr. Koch's *Sammlung der Preussischen Medicinalgesetze;* copies of which have just been imported by M. Schloss, in the Strand.]

ROYAL INSTITUTION.

Friday, January 31, 1834.

It had been announced that Professor Brande was to give a lecture this evening, on the Gas-lighting of the metropolis; but that arrangement was broken up by the death of the Professor's father, Dr. A. Brande, of Chiswick, who died, we understand, on the 27th inst. in his 87th year.

The task of supplying a lecture for the evening was imposed, at a short notice, on Dr. Ritchie, and that gentleman in consequence gave an interesting account of his *latest researches and further experiments on the subject of Electro-Magnetism.* There was, however, nothing particularly new that struck us in the course of the lecture. The chief object of the experiments was to shew the possibility of applying the electro-magnetic power to the production of motion; and Dr. Ritchie mentioned that he was engaged in ascertaining some important laws in electro-dynamics. Several of the experiments had been exhibited before, but they were now managed more ingeniously and with more skilfully-constructed mechanical contrivances than hitherto. In conclusion, the lecturer showed how the mode in which the electric spark was elicited from the magnet, tended powerfully to corroborate the undulatory theory of light.

LYNN SELF-SUPPORTING INSTITUTION.

To the Editor of the Medical Gazette.

Sir,

We doubt not you will be pleased to learn that we have established a Self-supporting Institution in this town. We have no Dispensary, for every patient takes his card to the surgeon *of his choice.* This, we conceive, is a most important feature in our plan, the advantage of which must be generally acknowledged: when, especially, it is considered that the attendance, which, under the old Dispensary system, was given to the poor by *one young man*, may now be divided amongst all the experienced practitioners of a town.

We have accepted a few donations to assist in our outfit; but the institution is strictly self-supporting: no part of these donations is appropriated to the use of the medical gentlemen. At the end of every year, the subscribed funds are to be divided amongst the members of our board, in proportion to the number of cards held by each practitioner.

The code of bye-laws for the guidance of the members of the board, is at the service of any of our professional brethren who may be desirous of establishing an institution upon this plan.

Our books have only been open five Mondays, and we have enrolled 1428 inhabitants. In general they express themselves grateful for the trouble we have taken to serve them; and we doubt not but this institution will be of great benefit to the working and poorer classes, as well as to the town at large, by bringing

about a better state of feeling, and by very materially reducing the burden of the poor-rates.—We remain, sir,

Your obedient servants,

JOHN TWEEDALE, M.D. Pres.
J. WM. CHADWICK, M.R.C.S.
Vice-President of the Board of Management.

Lynn, Feb. 3, 1834.

ST. ANDREW'S DEGREES.

To the Editor of the Medical Gazette.

Royal Medical Society's Hall,
Edinburgh, Jan. 29th, 1834.

SIR,

I HAVE been directed by the Royal Medical Society of Edinburgh to forward to you the annexed paragraph, as copied from the Edinburgh journals:—

"ROYAL MEDICAL SOCIETY.

"In consequence of the receipt of a copy of the Resolutions of the Royal College of Surgeons, in reference to the late proceedings of the University of St. Andrew's, an extraordinary meeting of the Royal Medical Society of Edinburgh was held on Monday, the 27th instant, at which the following resolution was unanimously agreed to:—

'That the Society return thanks to the Royal College of Surgeons, for their attention in sending them notice of their proceedings relative to the St. Andrew's degrees. The Medical Society concur completely in the sentiments so ably expressed by the Royal College in their printed documents, and are glad to find that the College is ever ready to advance the real interests of the students, and enhance the dignity of the profession, by endeavouring to secure as far as possible an extensive and liberal course of education. 'By order of the Society,

'G. A. F. WILKS,
'President.'"

Should the interest you have shewn in the late proceedings of the University of St. Andrew's, induce you to insert the above statement of the Society's proceedings in a page of your widely-circulated journal, the object of the Society in forwarding it to you will be attained, namely, to give as much publicity as possible to their resolution on a question in which they conceive the interests of medical students generally are especially concerned.—I am, sir,

Yours, &c.
G. A. F. WILKS,
President of the Royal Medical Society of Edinburgh.

PARLIAMENTARY INQUIRY.

ON Tuesday, the 4th (the first day of the session), Mr. Warburton gave notice that he would take an early occasion of moving for a Committee, "to inquire into the state of the Medical and Anatomical *Schools*." Query—Is the investigation to be limited to this subject?

NEW MEDICAL WORKS.

A Treatise on the Circulation of the Blood. In 2 Parts. Part I.: An Explication of the Anomalies of the present Doctrine. Part II.: An attempt to explain how the Circulation of the Blood is accomplished by motive Powers different from those which are supposed to effect that Operation. By J. F. Handley. 8vo. 3s. sd.

Parkes's Chemical Catechism. 13th Edit. Edited by E. Brayley. 8vo. 15s. bds.

On Dentition, and some coincident Disorders. By J. Ashburner, M.D. 18mo. 4s.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Feb.* 4, 1834.

Abscess	3	Heart, diseased	3
Age and Debility	37	Hooping-Cough	3
Apoplexy	1	Inflammation	36
Asthma	15	Bowels & Stomach	2
Cancer	1	Brain	3
Childbirth	10	Lungs and Pleura	5
Cholera	3	Insanity	4
Consumption	65	Jaundice	1
Convulsions	32	Liver, diseased	2
Dentition or Teething	11	Measles	11
Diarrhœa	1	Mortification	5
Dropsy	11	Paralysis	3
Dropsy on the Brain	8	Small-Pox	6
Epilepsy	1	Sore Throat and Quinsey	1
Erysipelas	1	Spasms	1
Fever	14	Unknown Causes	1
Fever, Scarlet	9		
Fever, Typhus	1	Stillborn	18
Hæmorrhage	1		

Increase of Burials, as compared with the preceding week . . . 3

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Jan. 1834.	THERMOMETER.		BAROMETER.	
Thursday . 30	from 29	to 43	30·25	to 30·18
Friday . . 31	35	44	30·12	30·10
Feb.				
Saturday . 1	33	43	30 08	30 01
Sunday . . 2	25	42	29 96	29 91
Monday . . 3	29	45	29·89	29 94
Tuesday . . 4	33	48	29 84	29·76
Wednesday 5	37	47	29·76	stat.

Wind variable, S. and S.E. prevailing.

Except the 1st and 2d inst., generally cloudy; rain at times on the 31st ult. and 5th inst.; a few flakes of snow in the morning of the 30th ult.

CHARLES HENRY ADAMS.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 15, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

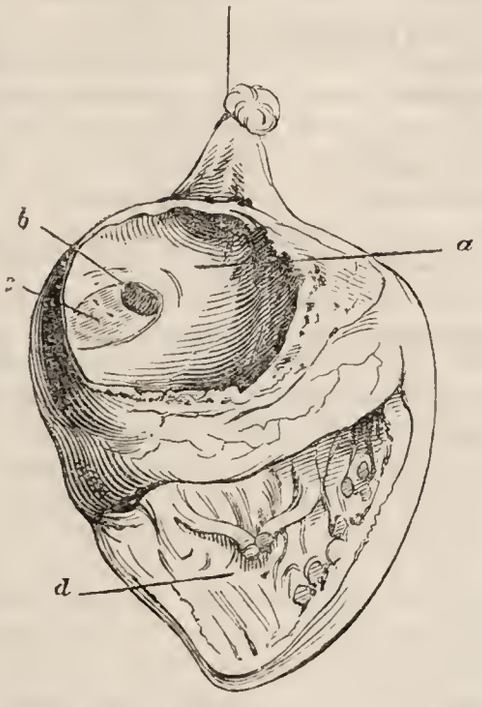
By Francis H. Ramsbotham, M.D.

Lecture XIX.

PECULIARITIES OF THE FŒTUS.

THORAX.

The fœtal heart differs materially from the same organ in the adult. In size, it bears rather a larger proportion to the bulk of the body generally; and the walls of the two ventricles are, as nearly as possible, of the same thickness.



Fœtal heart of the natural size; the auricles and ventricles are cut open, their septa being preserved; it is suspended by the superior cava. *a*, Cavity of the right auricle. *b*, Foramen ovale. *c*, The valve of the foramen, partly drawn over the aperture. *d*, Cavity of the right ventricle.

Foramen ovale. — Between the auricles there is an opening of an oval shape, large enough to admit the barrel of a goose quill, called the *foramen ovale.* It is covered by a membranous valve on the left side, and gives a passage to the blood directly from the right auricle to the left; while the valve prevents its return through the same aperture. It is beautifully displayed in this preparation.

The foramen ovale generally closes soon after breathing has commenced; but in some instances it remains pervious throughout the individual's life; which, however, in that case is seldom protracted much beyond puberty. The countenance of such persons, and, indeed, the whole of the surface, assumes a bluish or livid hue, in consequence of some unchanged, dark blood circulating in the arteries along with the proper, arterial blood; and giving a tinge which is seen through the transparent skin. These are generally called *blue children.*

Ductus arteriosus. — Besides the foramen ovale, situated in the heart itself, there is another striking peculiarity in the vessels leading from the heart. The pulmonary artery in the fœtal subject divides into three branches—one going to the right lung; another to the left lung, as in the adult; and a third, — which the adult has not, — passing direct to the aorta, called the *ductus arteriosus*, and which, although very short, is almost as large in its calibre as both the other branches together. Here are a preparation and a diagram [presenting them] shewing this vessel. The ductus arteriosus carries nearly half the blood direct from the right ventricle of the heart to the aorta, without allowing it to circulate through the lungs. By this arrangement also, the column of blood, which is to pass through the whole length of the funis umbilicalis, receives an impulse from both ventricles at the same time; as some part

of the blood comes from the right, and some from the left side. The utmost force exerted by one ventricle could scarcely be supposed sufficient to propel the blood through such a long channel as the funis umbilicalis. This vessel, too, closes soon after breathing life is established, a short time previously to the obliteration of the foramen ovale; but if the foramen ovale remain open for any time, the ductus arteriosus also continues pervious. The ductus arteriosus, indeed, answers a purpose exactly similar to the foramen ovale, because it keeps up a communication between the ventricles in the same way as that opening does between the auricles; not, indeed, a direct communication between the sides of the heart, but between the large arteries just as they emerge from the ventricles, which is in effect perfectly the same. One of the most common malformations of the heart is the want of the septum ventriculorum, as is shewn in this heart [presenting it]: during fœtal life this irregularity is of little consequence; but on breathing being established, it is productive of the most serious mischief.

Mons. Billard, of the Hôpital des Enfans Trouvès, of Paris, in a work published a few months since, says he found the foramen ovale pervious in the following proportion of children, who died at the respective ages:

14	out of	19	of 1	day old.
15	....	22	.. 2	days old.
14	....	22	.. 3	.....
17	....	27	.. 4	.....
13	....	29	.. 5	.....
5	....	20	.. 8	.....

and in the latter number the aperture was very small.

Thus we see that very commonly the communication between the two auricles is free till eight days after birth; and may remain so even for twelve, fifteen, or twenty-one days, without any inconvenience manifesting itself.

He observes also, that the period of obliteration of the fœtal canals is very variable, and takes place in the following order:—first the umbilical arteries become impervious; then the vein; then the ductus arteriosus; and a day or two after the latter vessel the foramen ovale closes.

ABDOMEN.

Liver.—In the abdomen there are many peculiarities; and, in the first place, let us consider the liver. This gland in the fœtus is immensely large, and occupies both the right and left hypochondriac regions, reaching down almost to the brim of the pelvis. The left lobe is nearly as large as the right, so that when we squeeze an infant just below the ribs on either side, the part we press upon is the liver; it is the chief cause of the tumidity of the infant's abdomen. Many vague notions have been entertained on the function of the fœtal liver. Thus Bryce believes that it acts as a sort of absorbing sponge for the blood till the lungs can receive their proper quantity, after breathing has commenced; MM. Prevost and Dumas suppose that it forms the red globules; Fourcroy, that it principally tends to decarbonize the blood, and deprive it of hydrogen; and Lobstein, that the vital fluid is actually elaborated in it.

From the large size of the organ we may reasonably infer that it serves some most important purpose in the fœtal economy, and that it is, in some way or other, subservient to nutrition. No attempt has been made, till very lately, to explain, on the grounds of observation, how this can be; but Dr. Lee has instituted some investigations to prove that the liver secretes a fluid during utero-gestation, which mainly serves the purpose of nourishing the fœtus. He has ascertained that the stomach of the fœtus, from three to nine months old, always contains a semi-transparent, ropy, mucous fluid, which is occasionally of an acid character; but never the smallest admixture of albuminous or other apparently nutritious matter: while in the upper half of the small intestines—particularly the duodenum, and more especially in the neighbourhood of the papillary projection, through which the ductus communis choledochus empties itself into the gut, he uniformly found a pultaceous mass, of an orange or pink colour, possessing the properties of albumen. The lower half of the small intestines contains very little of this substance; for the quantity gradually diminishes as we descend in the tube; and the meconium is confined solely to the large bowels. In two instances he discovered a fluid resembling that of the duodenum—viz. pure albumen—in the hepatic duct, in sufficient quantity to make it the subject of analyzation.

Dr. Lee remarks, that "the absence of albuminous matter in the stomach of the fœtus, its invariable presence in the upper half of the small intestines, its gradual diminution as we proceed downwards, and its disappearance in the colon,—viewed in connexion with the great length of the small intestines,—seem to prove that the absorption of some nutritious substance takes place in the intestinal canal during the latter months of gestation, in like manner as it does after birth;" and again—"I have been led to conclude, from these facts, that the function of the fœtal liver is not, as has been generally supposed, that of separating from the blood an excrementitious fluid, injurious to the economy of the

child – at least, that such is not its only use, but that it possesses some other important office destined to assist in the nutrition of the fœtus:" while the Editor of the Medico-Chirurgical Review observes, "If these facts be corroborated by future investigators—and we venture to predict that they will, we shall then have a satisfactory explanation of the large size of the liver in the fœtus, and of the important effects which the bile, in all ages of the individual, produces on the animal economy, and particularly on the growth and support of the body."

Now, as far as I know, there is not a single physiologist of repute to be found, since the first dawn of the science, but who considers the liver in some way or other instrumental to the development of the fœtal body; and I cannot see that Dr. Lee has added one iota to our knowledge of the mode in which that development takes place. If I understand Dr. Lee's position rightly, it is that the blood is brought from the placenta freighted with the principles of nourishment—is carried to the liver to be then changed into a secretion, which is to be absorbed by the alimentary canal, again to form blood. What necessity can there be for this complicated action, when the blood, endowed with the principles of nourishment, is itself received into the fœtal body? I take it for granted that the blood is so endowed previously to its circulating through the liver, else nutritious particles could not be separated from it; and if that be the case, why should it be changed into a secretion, and afterwards that secretion be digested, to form fresh blood? It may be replied, that the fœtal system requires that some alteration should be effected in the vital fluid, after its sojourn in the placenta, to fit it to perform its necessary functions; and that such alteration occurs in the liver. This possibly may be, and probably is true; but, as yet, we have no evidence of what that peculiar change consists in. It is by the placental vessels that the nutritious matter is taken up, and through the placenta that it passes to the fœtal body; and, as far as accounting for the first derivation of that nutritious matter is concerned, Dr. Lee, in my opinion, has left the subject just where he found it. I do not pretend to deny his facts, nor would I undervalue the assiduity with which he prosecuted his researches; but I can by no means understand how blood, imbued with the principles of life and nourishment, circulating in the vessels of the fœtal body, can require to be digested again to form fresh blood, and to be again received into the vessels of the same system. In the adult, the necessity of the assimilation of lifeless matter taken into the stomach is immediately apparent; but no analogy can be drawn between such *food* and the *living blood* circulating in the fœtal vessels. Dr. Lee was assisted in the chemical analysis by the celebrated Dr. Prout; and his essay was communicated to the Royal Society, by Dr. Prout, on the 19th of June, 1828.

Ductus venosus.—In the fœtus, the umbilical vein which enters the body at the navel, runs up to the fossa of the liver, and, joining the left vena portæ, it there divides into two branches—one enters the liver by various canals, and distributes a large quantity of blood through that organ, while the other sends a portion of the blood direct to the inferior cava: this latter canal is called the *ductus venosus*. It usually enters the left vena cava hepatica, or the inferior cava itself, just where the cava perforates the diaphragm. Sometimes it terminates nearer to the heart, at others it enters the right auricle as a distinct vessel; so that the arrangement, in different cases, is much diversified. The umbilical vein, and consequently the ductus venosus, become impervious soon after birth; the circulation through them necessarily ceases as soon as the navel-string is tied. The umbilical vein in the adult has dwindled into a completely impervious cord, and forms the ligamentum rotundum of the liver.

Gall-bladder.—The gall-bladder is seldom found empty; it generally contains some fluid of a viscid quality and green colour, but it is scarcely bitter, and possesses none of the pungency of the bile in the adult.

Stomach.—The stomach of the fœtus, at birth, is much rounder and more vascular than in the adult, which you have an opportunity of seeing in this beautifully injected preparation [presenting it]. It is also much smaller in comparison to the size of the body; it would not contain more than an ounce, or an ounce and a half, of fluid; and knowing its small dimensions, its great excitability and vascularity, we derive a practical lesson which, by nurses, is too much neglected;—I mean, that we should inculcate the necessity of not stuffing a child with food immediately on its birth. You will find it one of the most difficult parts of your practice to root out old prejudices; and one of the opinions which nurses cling to with the greatest obstinacy, is that children are always born hungry, and that when they cry it is for something to eat. As soon, therefore, as they have washed the infant and dressed it, they begin to pour gruel, by table-spoonsful at a time, down its throat, until they distend the de-

licate organ much beyond what it can bear, and occasion great distress. They consider the screaming induced as an indication of increased hunger—that the child is crying for more food. The consequence of the distention must be great pain to the suffering little being, which is only relieved by the stomach rejecting what it has unwillingly been forced to receive. But the mischief does not stop here: most probably some of the stimulating, indigestible matter will pass the pylorus, and enter the intestines; and then a new train of symptoms equally distressing occurs—increased pain, griping, and relaxation. The nurse now calls out loudly for the physician's assistance to remedy the effects of her injurious interference. Medicine is given, which keeps up the irritation previously caused; and a succession of the most alarming symptoms follow—even to congestion of the brain, convulsions, and death. I am perfectly persuaded, that a great number of the children who die during the first or second months of life, owe the commencement of their disease to such meddling practices as I have just described. I believe also that many of the diseases to which children are liable—especially mesenteric enlargement—are produced by such improper management immediately after birth and during the first month. If the child requires nourishment at all—and I do not believe it does for many hours—nothing should be allowed except a little warm milk, sweetened with refined sugar, until that food which nature has so providentially and bountifully supplied is prepared for its sustenance; and of that it may take as much as it will, and as often as it pleases.

Intestines—Meconium.—Long as the intestinal bowels are in the adult, they are of considerably greater extent, comparatively, in the fœtus. In the large intestines we observe a peculiar semi-fluid substance, sometimes in great quantity, being the accumulated secretions of the alimentary canal and liver, during the last months of utero gestation. It has been called—from μηκων, poppy, in consequence of its resemblance to the inspissated juice of that plant—*meconium*. It is evidently excrementitious, and is voided as the first stools of the infant after birth. It is thick, viscid, and so tenacious that it sticks to the fingers, is of a green colour, and does not possess a fæcal odour. It is supposed by nurses to be very stimulating and injurious: they are always anxious to get rid of it—that the child's stools should be early "changed"—and are desirous that medicine should be given to the infant immediately after birth, "to cleanse it." I am often asked, "Doctor, are you not going to order some medicine for the baby?" My reply is, "Why should you give physic to the infant, so long as it is well?" I do not think the meconium produces any of the bad effects attributed to it; and the natural peristaltic action of the canal, which commences as soon as breathing life is entered upon, generally expels this matter in four or five days at the farthest, without the aid of any artificial irritation. If, however, I find the intestinal action sluggish, I order a tea-spoonful of castor-oil, or a few grains of magnesia in a small quantity of dill-water. We know when the meconium has all come away, by the stools having quite lost their sticky and green appearance and assuming a lightish-yellow colour.

Kidneys.—The kidneys of the fœtus differ in their external appearance from those of the adult. They are lobulated, with deep sulci passing between the lobes; and there is very little fat surrounding them. We have hourly an opportunity of observing this lobulated appearance of the fœtal kidney in lambs and calves exposed at the butchers' shops. Another peculiarity connected with this organ is a glandular body, of a triangular shape, mounted on the upper surface of each kidney, somewhat like a cocked hat, to which we give the name of *glandulæ renales*. They are not much less than the kidney itself, and derive their blood from the renal arteries. In structure they very much resemble the thymus gland. No duct has been detected leading from them, and they are supposed to be a diverticulum to the renal blood, as little or no secretion of urine occurs during fœtal existence. They begin to be absorbed as soon as breathing life is entered upon.

Vesica urinaria.—The urinary bladder differs very much in shape from that of the adult: it is conical, and is placed in the abdomen, the pelvis being too small to contain it. Running up from the fundus of the bladder to the umbilicus, there is a process called the *urachus*, which I have before mentioned. In the human subject it terminates at the navel; but in the quadruped it is a hollow tube, traversing the umbilical cord, and terminating in a sac between the chorion and amnion, called the *allantois*; so that a free communication is kept up in most fœtal animals between the internal cavity of the bladder and this bag, situated between the fœtal membranes.

Testes.—Until between seven and eight months of fœtal existence have passed, the testicles are found in the abdomen, placed over the psoæ muscles, and they are bound down to those muscles by a production of the peritoneum, which afterwards becomes, according to Cooper, their *tunica vaginalis*.

There is a fibrous ligament extending from the lower end of the testicle to the scrotum, which was first described by Hunter, and by him called the *gubernaculum testis*, because he supposed it governed and directed the descent of this gland through the ring. The testicles generally commence their descent at about five or six months of utero-gestation, and are usually found in the scrotum at birth. In this specimen [presenting it] you see them passing through the rings, but not yet in the scrotum. During their escape out of the abdomen, the peritoneum becomes stretched and elongated, giving before them as they descend, and forming their external coat, the *tunica vaginalis reflexa*. The aperture through which the testicle has descended generally closes, by a process of adhesion, as soon as the gland has made its entrance into the scrotum; so that it is shut up in a separate cavity of its own, perfectly distinct from the abdomen. The internal oblique and transversalis muscles also send down fibres, which envelop the testis, as in a sling, and become the cremaster muscle. Sometimes the aperture through which the testicle has passed does not close, but remains open; a portion of gut then descends with, or soon after, the testicle, is received into the cavity of the vaginal coats, and forms congenital hernia.

We sometimes find that one or both testicles have not descended before birth, but that they remain for a short time in the abdomen, or in the inguinal canals, and then gradually enter the scrotum. It more rarely happens that they do not appear in the scrotum till towards puberty; and more rarely still, that they do not descend at all during life. In this state they cannot perform their functions perfectly, although the secretion may not be defective, because they have not obtained the cremaster muscle, which assists in the emission of the semen. I would recommend you, whenever a child is brought with a tumor in either groin, to examine the scrotum particularly and carefully, that you may ascertain whether the testes have descended. You can easily know them by their oval shape, and rather firm, slippery character. If you can feel them both, you may suppose the tumor in the groin is a commencing hernia, or an enlarged gland. If, however, you do not feel the testicle on that side where the tumor appears, you may suppose that it is the testis descending. Most irreparable injury might be done by neglecting this simple rule. If a truss, or any compress, were applied to the testicle, under the supposition that it was a hernia, inflammation, with all its direst effects, might ensue;—nay, the testicle has been punctured in this situation in adults, in mistake for a suppurating gland.

How does the testicle get into the scrotum? It has been ascribed to the influence of gravitation; but this cannot be, because as the head of the fœtus lies usually towards the cervix uteri, the gland has indeed to ascend, instead of passing downwards, when the woman is in the upright posture. Mr. Hunter accounted for the descent of the testicle, by supposing that the gubernaculum shrivelled, and became absorbed; and as this action went on, in the same degree would the testicle be drawn towards the scrotum. This, I think, is the most reasonable supposition that we have on the subject.

Comparative development of the different systems in the fœtus.—The different systems are very variously perfected. The bony structures are but imperfectly formed; the muscular structures scarcely at all developed; the organs of sense, as we had an opportunity of observing in the bones of the ear, are almost perfect; the nervous system bears a very great proportion to the bulk of the body; the brain is excessive; the spinal marrow, and all the nerves, are exceedingly large; and the glandular system in the fœtus is of much greater importance, if we may judge from the number and size of the different organs of this class, than it is even in the adult. The fœtus has a thymus gland, and two renal capsules, which the adult has not; the liver also, and the thyroid gland, are much larger in proportion than they are in the adult. The blood-vessels are more numerous, and most of them of larger calibre. In all this we see the beauty of design,—the adaptation of supplies to wants—of means to ends;—and we trace, as throughout the whole of nature, incontrovertible evidence of an overruling Spirit, supreme in power, in wisdom, and in mercy.

Fœtal Circulation.—It only remains that I should speak to you of the fœtal circulation; and in order that we may more easily understand the difference between this function in the fœtus and the adult, I shall first follow the course of the adult circulation.

The blood in the adult subject is brought by the pulmonary veins into the left auricle: on the left auricle contracting, it is sent into the left ventricle; from which the aorta arises, and distributes it over the body. It is then returned to the right auricle by the venæ cavæ: the right auricle contracts, propels the blood into the right ventricle: from that ventricle the pulmonary arteries arise, which circulate it through the lungs; and from the lungs, it is again carried by the pulmonary veins

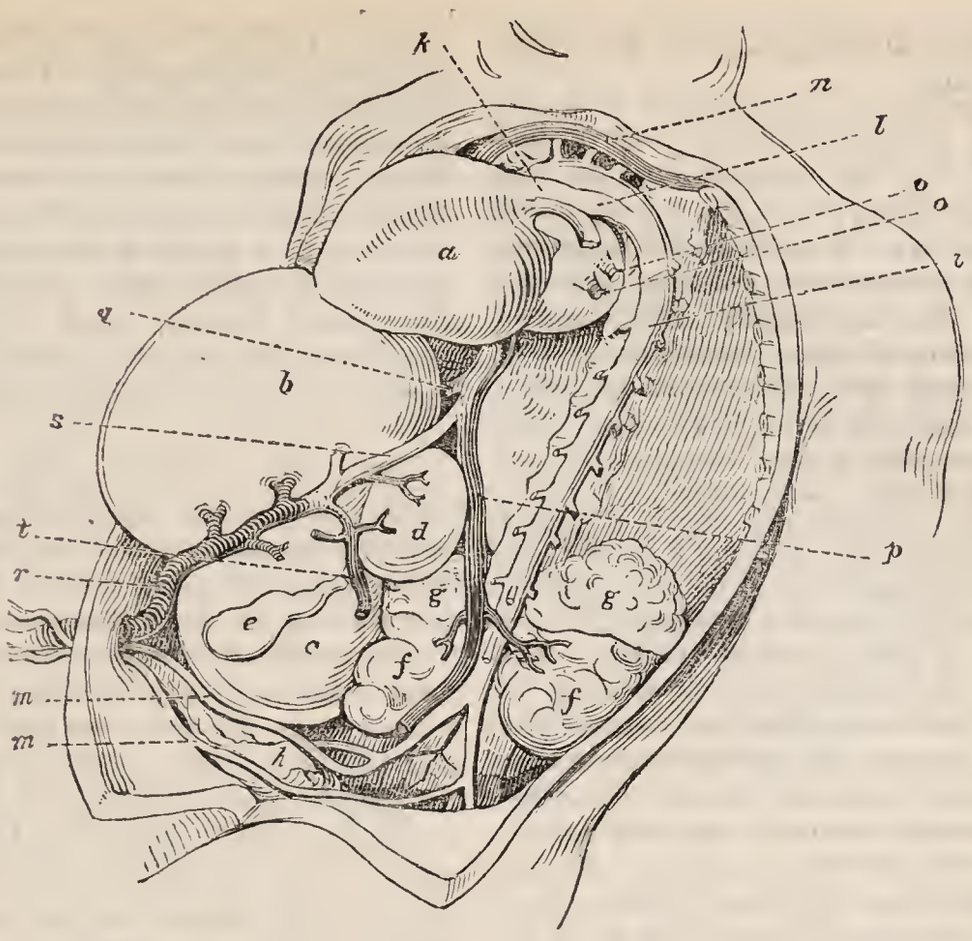
into the left auricle,—and so the double round is run.

In the fœtus, the circulation is single, but much more complicated. The blood is brought by the umbilieal vein to the body of the fœtus: the greatest part of it enters the liver, circulates through that organ, and is transmitted by the vena cava hepatica into the inferior eava: another part goes through the ductus venosus, enters the vena cava without having circulated through the liver, and both mix in the right auricle of the heart. The right auricle contracts, and sends part of the blood to the right ventricle, and part to the left auricle, direct through the foramen ovale. That part which is sent into the right ventricle, on the contraction of that ventricle, is propelled into the pulmonary arteries; part of it going to nourish the right and left lung; and part—more than one-third—enters the aorta direct through the ductus arteriosus. That blood which has circulated through the lungs, is returned by the pulmonary veins to the left auricle, but it cannot get back to the right on account of the valvular apparatus closing the foramen ovale: in the left auricle, it mixes with the portion sent through the foramen ovale, and is transmitted to the left ventricle; the left ventricle then contracts, and sends its contents into the aorta, to be circulated through the body; having become mixed with that which passed from the pulmonary artery to the aorta through the ductus arteriosus. The internal iliac arteries give off the umbilical, which carry the blood to the placenta, to be distributed over it; and from that organ it is returned by the umbilical vein.

If this description be correct—and there is no doubt it is so—it appears to me that there must be three pulsations in the fœtal heart;—the pulsation, first of the right auricle, then of the left auricle, then of the two ventricles acting together. If the two auricles acted at the same moment, as we believe they do in the adult, of what use would be the foramen ovale?—Provided the left auricle closed at the same time as the right, the blood would not pass through the foramen ovale, because there would be no cavity to receive it. There must be then a contraction of the right auricle first, then of the left, and then of the two ventricles simultaneously.

Fœtal Pulsation.— With regard to the number of pulsations in the fœtal heart, by some it is computed as low as 50 or 60, by others as high as 130 or 140. The observations usually made on this subject are far from being free from objections. When the funis umbilicalis, indeed, has descended before the fœtal head, and the artery is beating strongly at the time, we can put our fingers upon it, and by looking at our watch, can count the number of pulsations to a nicety; but it almost always happens, that when the funis is prolapsed, its vessels are somewhat compressed, and the heart then beats quicker than natural, to make up in celerity for the diminished quantity of blood which it is capable of propelling at each systole; so that this is not quite a fair mode of calculating. But the advocates of auscultation, as a means of distinguishing pregnancy, inform us, that they can, through the use of the ear, with the greatest precision, number the beats of the fœtal heart; and Dr. Kennedy computes them, in the ordinary state, at 130 or 140: he tells us, at the same time, that the pulse is sometimes much slower, and at others considerably more rapid. He has observed them, in one case, as low as 92, in another 88: in another they beat 190 or 200, as nearly as could be guessed. He states also that there is a very sensible difference in the strength of the beats at different times; and that from causes affecting the mother,—such as fainting from loss of blood,—the rapidity of the fœtal circulation is exceedingly increased or diminished, within an astonishingly short space of time. I have already told you that I have not yet acquired that delicacy in the application of the organ of hearing necessary to discriminate the beat of the fœtal heart; but, nevertheless, I have not wanted many opportunities of observing the pulsation in a tolerably natural state. When I have introduced my hand into the uterus for the purpose of turning the child, I have often felt the cord pulsating strongly: I do not mean to say that I have kept my hand in the uterus and deliberately counted the pulse; but I have, under these circumstances, distinguished the beats most plainly when there could be but little pressure on the cord; and as far as I could judge of them in that hurried manner, I should say they were between 80 and 100 in the minute. The fœtal circulation does not keep pace with the maternal; for if the maternal be hurried, it is not necessary that the fœtal should be also: we may have the maternal heart beating 120 or 130 strokes in the minute; while that of the fœtus continues at the natural standard.

The different preparations on the table shew, in an evident and clear manner, the peculiarities treated of. But this plate of Professor Tiedemann displays the fœtal circulation better than any of the injected specimens.



a. Heart. *b*. Left lobe of the liver turned back. *c*. Right do. *d*. Lobula Spigelii. *e*. Gall-bladder. *f*, *f*. Kidneys. *g*, *g*. Glandulæ renales. *h*. Urinary bladder of a conical shape: the urachus is seen extending up to the umbilicus. *i*. Aorta, giving off the intercostals, &c. *k*. Pulmonary artery; the left branch observed cut. *l*. *Ductus arteriosus*. *m*, *m*. *Umbilical arteries* arising from the internal iliacs, running up one on each side of the bladder, and passing out at the navel. *n*. Left subclavian vein. *o*. Two of the pulmonary veins, terminating in the left auricle. *p*. Inferior cava. *q*. Vena cava hepatica. *r*. *Umbilical vein*. *s*. *Ductus venosus*, the continuation of the umbilical vein. *t*. Vena portæ.

Note.—By an error of transcription, in Dr. F. H. Ramsbotham's last lecture, reference was made to the Gentleman's Magazine, for December 1762; when it should have been October 1774. None of the sentence, except the words "a learned gentleman," should have been within inverted commas.

OBSERVATIONS ON THE

CROWING INSPIRATION OF CHILDREN,

And its Connexion with a Morbid Condition of the Thoracic or Cervical Absorbent Glands.

By Hugh Ley, M.D.

Physician-Accoucheur to the Middlesex and to the General Lying-in Hospitals, and to the Parochial Infirmary of St. George's, Hanover-Square.

[Continued from page 709.]

Dec. 4th.—William Scott, aged two years and two months, was brought to me on account of cough, disturbing him principally in the night, preceded by the sound of mucus in the trachea, coming in fits, and "*almost seeming to strangle him.*" He has also sometimes *complete suspension of his breathing, without cough*, from which he recovers with a sonorous inspiration, which led the mother to suspect that he might have hooping-cough. This, however, did not alarm her so much as an opinion which had been confidently expressed, that the child must have water upon the brain. Except the sound of mucus, which is not constant, this child has no symptom of catarrh, or inflammation of any kind. The limbs are much extenuated; the belly enormously distended, but not symmetrical, the principal enlargement being above, and to the left of the umbilicus, and gradually diminishing again towards the pubis. The appetite is good, often ravenous; but much of the food passes through the alimentary canal undigested. This is particularly the case with milk, and with potatoes; the for-

mer appearing, amidst greenish and slimy motions, white and curdled; the latter totally unaltered in character.

As there was no one circumstance, but the crowing, which could lead to the suspicion in this case of the existence of head affection, my attention was particularly directed to the cervical glands, the whole chain of which I found enormously enlarged and indurated; and this apparently from a scabby eruption upon the face and head. The only medicine prescribed was a combination of hydrarg. c. creta, gr. ij.; pulv. rhei, gr. iij.; sodæ carb. gr. iij. daily; confining myself to these simple measures, that I might see the effect of treating principally the eruption, upon which I believed the whole series of phenomena to depend; for this eruption I considered to be the cause of the diseased condition of the glands; the enlargement of the glands to influence the recurrent nerve, probably the par vagum also; and the affection of these nerves to have produced the symptoms referrible both to the larynx and to the stomach. I directed, therefore, the scabs to be poulticed, where poultices could be applied; in other places to be fomented with a sponge and warm water until the crusts should separate, when the surface beneath was to be very lightly smeared with the unguentum hydrargyri nitratis, diluted with three-fifths of spermaccti ointment.

13th.—There has been no return for two or three days of the breathlessness, or crowing; and the cough is nearly gone. The eruption is fast disappearing; and the glands near the trachea, in the lower half of the neck, are very greatly diminished in size and hardness, those nearer the angle of the jaw remaining still of considerable bulk.

26th.—There have been no further attacks of breathlessness, crowing, hooping, or "*strangling cough.*" The stomach is greatly reduced in size, and there is no longer undigested food in the motions. The child is full of life and animation, and the eruption quite gone. All the glands anterior to the sterno-mastoid have disappeared; but some behind those muscles are still distinctly prominent.

I have not seen this child since the 26th, when I considered it convalescent; and I apprehend little doubt can exist that the enlarged cervical glands were here the cause of the malady. In this case there was no ground to suspect that the bronchial glands were simultaneously affected, seeing that the cause of the enlargement was no constitutional taint, as scrofula, but a local excitement at a point distant from the entrance of the absorbents of the neck into the venous system, and exciting the glands in the course of the lymphatics, from the eruption downwards*.

Dec. 2d.—Caroline Rycroft, aged eight months, pale and flabby, has been brought up entirely at the breast of its mother, a young woman of 22, the father having through life been subject to enlargement of glands in the neck. This child was well till Sunday, Nov. 11, when it was suddenly seized with what was called "a fit," which came on with "a gasp" immediately upon the mother beginning to wash its head with cold water. During the attack the body was not violently agitated with convulsions, but the limbs were rigid and extended; the trunk bent backwards; the hands permanently clenched, after attempts to grasp the first object within their reach; the countenance at first pallid, then "*of all colours—the face, in fact, like a corpse;*" the veins then became blueish, and "*shewed very much;*" the lips, first colourless, were afterwards livid, and "*she appeared to be strangling.*" From this she at length recovered, with an interrupted crowing inspiration; then, after crying violently for three quarters of an hour, she fell exhausted into a tranquil sleep, which lasted for three hours. She had cut the two lower incisors; and the upper, which were evidently advancing, had been lanced. Two leeches had been applied to the head, and some opening medicines given.

Since these means were employed she has been somewhat better; there has been no return of "*fits*" of such alarming severity; but the child has constantly awakened in the night, screaming so violently as to arouse the parents, who then find it "struggling for its breath," each attempt being commonly attended

* Jan. 19th.—Since writing the above the child has been once more brought to me. The glands by the side of the trachea can scarcely, if at all, be felt. Those towards the back of the neck are still large and prominent. All the symptoms have disappeared, excepting a mere remnant of the eruption upon the ears, and upon the scalp near them.

with the crowing inspiration and clenched hands. But as the parents appear to sleep soundly, until the crowing or the screaming awakens them, they are unable to say whether the breath has, or has not, during these attacks, been completely suspended.

In the course of the day the child is comparatively free from ailment; has no attacks; and its respiration is unembarrassed, excepting that it may be somewhat hurried for some time after "a fit of crying." The fontanelle is not at all elevated, and there are no symptoms of cerebral congestion or excitement. The veins, however, upon the forehead and temples, are somewhat injected, and very dark. There are acrid excoriations, and running behind the ears, which are swollen from erysipelas; and from the angle of the jaw along the whole course of the great vessels of the neck, towards the sides of the larynx and trachea, and in the direction of the clavicles, the absorbent glands are much enlarged and indurated, those above the right clavicle being larger and more numerous than upon the left.

The mother brought this child to me, because she had been told by several persons that it had water upon the brain. I was convinced, from what I had seen in numerous other instances, that the symptoms in this case depended upon the enlargement of the glands, exercising a direct, or, through the par vagum, an indirect influence upon the recurrent nerve; and that this increase of size in the glands was the result of the inflammation about and behind the ears. I contented myself, therefore, with the very simple measures of washing the parts affected frequently in the day with tepid milk and water, and giving daily four grains of rhubarb, with six of carbonate of soda.

16th.—There have been no further fits of breathlessness; the child, however, coughs in the night. This cough comes in fits, and is preceded by the sound of "*phlegm in the throat;*" but there is neither cough nor sound of "phlegm" during the day. The glands are diminished in size and softer; the erysipelas has greatly subsided; and the excoriation, eruption, or running tetter, is much less angry.

27th.—There has been no return of the fits of strangling, but the child still hoops and coughs occasionally, though less frequently and less severely in the night, when there is also still some sound of mucus; but she is almost free from this, as well as the cough, in the day.

Jan. 7th.—The cough is now very unfrequent and slight, even in the night; there has been no fit of breathlessness, and the crowing has entirely disappeared. The whole appearance of the child is greatly improved; "*it looks,*" says the mother, "*like another child.*" She coughed whilst in my room, but the cough is very trifling, like that of a slight cold, and loose. The discharge behind the ears has ceased, the inflammation has subsided, and the strength is so greatly increased that the child can now stand with the support only of a chair. The glands are not quite gone, but they have greatly decreased in size, and are decidedly softer.

The remedies were never changed.

This case is very analogous in character to the last. An inflammatory affection of the integuments of the head had caused considerable enlargement of the cervical absorbent glands, which, by their injurious influence from contiguity, directly or indirectly, upon the recurrent nerve, produced the breathlessness amounting to temporary *asphyxia*, the crowing, the sound as if of "increased secretion of mucus in the air-tubes," and cough of that peculiar kind which the parents constantly denominate "*strangling,*" and which is one amongst others of the characteristic symptoms of enlarged bronchial or cervical glands. As the glands became less, the more severe form of the disease, the breathlessness, disappeared, leaving only the cough with crowing. A further diminution of their size was attended with a cessation of the crowing inspiration; and when they had nearly disappeared, even the peculiar cough ceased also; the last in the series of symptoms which remained being the sound of mucus, and a common cough for its dislodgement. This order is what I have commonly observed; and the symptoms on the approach of the disease, when traced from its commencement, as in the first case of enlarged bronchial glands which I have detailed, have a similar relation to the progressive enlargement of the glands. At first there was, in that case, wheezing, with occasional common cough; then violent cough like hooping-cough, sometimes with, sometimes without, crowing; then "a fit" of *asphyxia; how-*

ever, *not convulsions*, from which the child recovered with the interrupted sonorous inspiration which gives the character to the ailment, and from which a pathological condition of the brain is so frequently inferred.

Although the following case is still under my observation, I cannot refrain from adding it to the others, not because it is needful to multiply instances in evidence and illustration of the pathological relation which I am considering, but because it goes far to prove, that even where there is strong ground for suspicion that there is head affection combined with the crowing inspiration, the cause of the latter should be sought rather in the neck or the thorax, than within the cranium.

December 19th.—W. C. aged 15 months, the child of a very respectable tradesman, has been brought up at the breast of its mother, but with occasional feeding. Had violent fits last March, for which, before I saw it, it had been largely bled from the jugular vein, took large doses of calomel, was actively purged, and recovered at least from its "fits." At that time, and up to the present moment, it had a depression of the globe of the eye, which, in its ordinary movements, keeps the upper edge of the iris constantly in view. In other respects and directions the motions of the eye are perfect.

This child is now pallid, with the fontanelle open, but depressed; the muscles flabby; the limbs greatly extenuated, but perfect in their movements; the belly tumid, especially at its upper, falling more inwards towards its lower part; the bowels torpid, though moved by moderate aperients, when the stools are heavy and offensive, often containing undigested milk, and, according to the mother, "always nasty." The globe of the eye is still depressed, and when the child attempts to look at objects above the line of this altered axis of the pupil, it raises the head, not the eye, for the purpose. There is, however, no strabismus; the child has no intolerance of light; it delights to follow the glare of a candle, or gaudy objects of any kind, and the pupil plays perfectly and quickly. The hearing is also perfect, without impatience of noise; the child distinguishes the voices of different persons, and betrays its little partialities; leaving readily the mother for the father, who plays and talks much with and to it, and quitting equally readily the father for the nurse, who, after all, is its greatest favourite. It has also occasionally the "carpo-pedal contractions."

This child often awakes suddenly in the night, struggling for his breath; his hands are clenched; the body bent backwards; the eyes staring; the face pallid and death-like; the lips colourless. The nurse is in constant fear that it may strangle; but at length, after violent struggles, the breath is partially recovered, with a sonorous inspiration, and the sound of "*phlegm in the throat*" is heard. Soon after this, a "*fit of screaming*" ends the attack, and the child falls asleep. These fits are comparatively rare in the day, but in the evening they return, and they are very frequent through the night—recurring, it is said, nearly every quarter of an hour. The two lower incisors have appeared; the gums of the upper jaw are irregular, much expanded, and very red.

The neck is studded by enlargement and induration of the chain of cervical glands from behind the angle of the jaw throughout their whole course to the sternum, and in the direction of the clavicle. In size and hardness they are like marbles, or bullets.

Having lanced the gums freely, I directed for this child small doses of the hyd. c. cretâ, with minute quantities of ipecacuan, and a mixture containing infusion of rhubarb, with cascarilla and soda, twice in the twenty-four hours.

December 23d.—The fits have been less severe and less frequent, and there have been none in the day. For the last two nights especially, their frequency and violence have been much diminished, and the child is altogether improved. The gums covering the upper incisors are still expanded, but less inflamed; and the glands in the neck, if not less, appear somewhat softer. The bowels not appearing sufficiently open, I added rhubarb in substance to the powders, and omitted the infusions.

26th.—Has not been quite so well. The fits of breathlessness and crowing have been more frequent. The medicines, therefore, were changed for calomel and scammony twice a-day, and saline aperients.

30th.—The child has had "a dreadful night;" its fits of breathlessness have been so severe that the parents were the

whole night in dread of suffocation. Had another fit this morning, which they thought would have strangled it. The face is pallid, but the veins are strongly marked, and the fontanelle, for the first time, decidedly elevated. Unable to divest myself, therefore, entirely of the dread that there might *now* at least be venous congestion within the cranium, as a concomitant, if not a cause, I felt that I should not be justified in withholding altogether remedies in which, under such circumstances, many would place reliance. Six leeches were therefore applied to the temples; more active aperients were directed; the tepid bath was to be used night and morning, and cold to be sedulously applied to the surface of the head.

The child slept better for a few hours after the application of the leeches, but the appearance of the child on the following morning was ghastly; its eyes, more down-cast than before, were dull and glazed; the fontanelle was again sunken, but the fits were as frequent and alarming as before.

January 1st.—There has been little improvement. The attacks of breathlessness and the succeeding crowing inspiration have been as violent as ever. The eye is still so down-cast that the sclerotic is distinctly seen above the upper edge of the iris. The cervical glands are yet large; those above the clavicles also indurated and enlarged. The gums being again much inflamed, I this day scored them deeply add freely; directed the continuance of aperients, and ordered the neck to be rubbed with the unguentum hydriodatis potassæ.

5th.—The crowing has been less frequent; the attacks of breathlessness less severe. The mother, therefore, feels sanguine of the child's recovery. I dare scarcely hope for such a result. Medicines and ointment to be continued.

9th.—Has had very little crowing, though there have been slight "*catchings in its breath.*" The appearance of the child to-day is much improved, and the glands in the neck diminished. Aperients and iodine ointment to be continued.

11th.—Had a bad day yesterday; the crowing and fits of breathlessness more frequent; the night also much disturbed.

14th.—Is reported by the servants to have had yesterday two such severe fits of breathlessness that it was with great difficulty, and after the lapse of a considerable time, the child partially recovered its breath, with the crowing inspiration. Shorter interruptions to its breathings were occurring throughout the day, succeeded by the crowing; in the course of the night, too, several times they were afraid it would die of the fits of suffocation, and to-day they have continued unabated. Once the mother thought the child had really ceased permanently to breathe. "It looked exactly like a corpse—it looked just like death," were her expressions.

Opening powders to be continued. Liquor Potassæ, with Liq. Hydriodatis Potassæ, to be given thrice a-day; and the iodine ointment to be continued.

15th.—Heard to-day that the child had passed a much better night.

17th.—Has again considerably improved. The nights have been little disturbed either by the breathlessness or crowing. The child looks altogether better. To-day, the bowels having been a little confined, there has been somewhat more of the "crowing," but it is described as "*nothing alarming.*"

20th.—Has continued much improved. Has still occasional catches in its breath, and crowing, but the former are comparatively trifling, and the latter much less shrill. In the course of the last night had only one attack of "catching," with slight crowing. I heard it also to-day, when it was produced by making the child cry when I was examining its gums. The sound convinced me that even in the attack the glottis is much more efficiently open. The glands near the trachea are very slightly perceptible.

This case is still under treatment. I am by no means free from apprehension that there may be some chronic affection within the head, left from the time of the fits in March last. I doubt if this be water, seeing that the senses, internal and external, are all perfect—that the child is lively and intelligent, and the fontanelle not at all elevated. It may be that it is thickening of the arachnoid, extending to the edges of the orbital foramina, and influencing some branches of the motor nerves, to the exclusion of others. But as this child has an hereditary taint from the mother, who has even now "*kernels constantly coming down in the neck*,"—the father also having a suspicious ap-

pearance of the same strumous disposition—the supposition is by no means improbable that there may be some glandular affection within the cranium: and as the extreme pallor of the child, the exhaustion from leeches, and the suffering and debility induced by calomel, prevent my having recourse again to these remedies, I have thought, upon the whole, that iodine offers the best chance for recovery. I may hereafter take an opportunity of communicating the result of this case; but I am unwilling to defer longer calling the attention of the profession to an important pathological condition, which is full of interest in the speculative inquiries which it involves, and the practical conclusions to which it leads. The theoretical considerations connected with the subject, I must defer until some future occasion. The practical inferences are important.

It has long struck me as extraordinary, that affections so different—as those of teething, eruptions upon the surface of, or vascular excitement within, the cranium, not to mention others which have been suspected—should be capable of producing one effect, common to them all, upon one set of muscles only of a mere fraction of a complicated tube, with which these parts have no direct communication or connexion. And yet such is the case. The effect of these morbid states, so different in character, situation, and importance, is confined not only to the glottis, but to one set of its muscles only. The muscles which bring together the arytenoid cartilages, and thus tend to close the glottis, overpower those whose office it is to separate these cartilages, and to enlarge this all-important chink. Constriction is the necessary consequence,—of the glottis, however, not of the larynx and chest, as stated by Capuron and North; for such description is either unintelligible, or inaccurate, or equivocal. It must be unintelligible, as applied to the cricoid cartilage, which is a perfect ring; and therefore to the larynx as a whole it is inaccurate, as applied both to this tube and to the chest; and it is equivocal, if applied, as I incline to believe is not unfrequently the case, to the "sense of constriction," which is to confound a mere sensation with an essential pathological condition. Some intermediate state, therefore, has appeared to me to be necessary to associate these very different affections in the production of this one common effect; and my experience fully warrants me in affirming, that this connecting link will be very commonly found in an enlargement of the thoracic, or cervical absorbent glands, or both. I have already shewn, that after the ordinary period of teething, enlargement of these glands may produce the symptoms of this constriction; and where such enlargement is the result of hereditary disposition, there must be always too much reason to fear that both sets or clusters (agmina, Haller), may be affected, and the hazard, therefore, the greater. But teething, scabby eruptions about the face and head, running behind the ears, and perhaps head affection, will also produce the breathlessness, succeeded by crowing inspiration. This, however, according to my observation, is rarely the case, unless these diseases have been accompanied with glandular enlargement, cognizable to the sense of sight, or of touch, or both, if seated in the neck; but if in the thorax, to be inferred by symptoms, where the patient recovers, or from the manner of the death, and by inspection of the body after death, when fatal. If simple excitement within the head, teething, or eruptions, could, without such intermediate state, or connecting link, produce the crowing inspiration, such symptom should be an every-day occurrence: it should be more common than in reality it is; for such causes are continually operating. Yet we often see instances of hydrocephalic excitement, going on to the destruction of the patient; of teething, perhaps from "*anormal development*," even ending fatally; and of extensive eruptions—unaccompanied throughout their course by this crowing, and, as I believe, because unattended with enlargement of these glands. Where head affection is attended with crowing, there being no evidence of enlargement of the cervical glands, the suspicion that the glands within the chest are simultaneously affected (which I should be tempted to infer, from the accidental occurrence of this symptom), is very materially corroborated by an observation, for which I am indebted to that indefatigable explorer of the minute and most remote distribution of even the filaments of nerves, Mr. Swan, whose engravings,

whilst they constitute a splendid monument of his industrious research, may, like the engravings of William Hunter upon the gravid uterus, and those of Sir Astley Cooper upon hernia, be considered as a most liberal and even expensive present to the profession. This gentleman has assured me, that he has seen in fatal cases of hydrocephalus these glands so frequently enlarged, that he looks upon the connexion as no uncommon occurrence, although he is not aware whether in those cases the crowing inspiration had been observed; and his observation, thus untainted by bias, appears to me the more important and conclusive. Where local irritation within the gums, or of the surface of the head, or face, produce the symptoms, commonly the cervical glands leading from the inflamed gum or surface towards that part of the venous circulation, into which their absorbents enter, are exclusively affected, and as these are confined to the neck, the danger from such cases is infinitely less.

The practical deductions from all this must be obvious; they are these:—1st, That where the crowing inspiration is observed, our attention should be more directed than it has heretofore been to the state of these glands. 2dly, That we should endeavour to ascertain the cause upon which the enlargement, where it exists, of these glands depends. 3dly, That the cause of such enlargement should be treated by appropriate remedies. These causes have been very briefly but accurately stated by Cruikshank, our highest authority upon such points, to be those to which I have already adverted,—scrofula, eruptions, dentition, and vascular excitement within the cranium. To the cure, then, of these pathological conditions, our measures should be directed; and the proofs and illustrations which I have already adduced, shew that this apparently alarming symptom commonly disappears with the gradual diminution of these glands.

Many other parts of this interesting subject require and amply merit investigation. I have, however, already, I fear, at present trespassed too largely upon the columns of the Medical Gazette—perhaps upon the time and attention of its readers; and these, therefore, must be reserved for a future opportunity.

[To be concluded in our next.]

MISCELLANEOUS REMARKS ON VACCINATION.

To the Editor of the Medical Gazette.

Sir,

Though the subject of vaccination is now become trite, and of little general interest in a merely medical point of view, there are a few circumstances relating to it on which a practitioner may still be allowed to record his own experience, and invite information from that of others.

I shall therefore beg leave to state certain miscellaneous facts which I have noticed as they occurred in the register of my practice, as one of the surgeons of the National Vaccine Establishment, and extending over a period of many years.

The way in which vaccination is modified by the interference of other diseases, and especially by that which it is intended to supersede, affords some particulars worthy of notice. I shall therefore first give a few selected cases on this subject, arranged according to the degree of interference; but I must premise that they are not all as full as I could wish, for having no hold whatever on the patients, to secure regular attendance, I am generally satisfied with requiring the eighth day of vaccination to be the first visit to me, by which time the character of the vesicle is usually fully developed, and it is in the fittest state to yield a supply of virus.

Interference of Small-Pox with Vaccination.

Nothing is more common with the children of the poor of this city, than this mixture of the two diseases. A great number of parents wait till the actual presence of small-pox in their own street, house, or apartment, drives them to the vaccine station; so that probably a large proportion of the children thus circumstanced have already received variolous infection. Hence we meet with every possible interference of the two diseases; from that in which the vesicle runs its course nearly in perfect regularity, with no other token of small-pox than slight sickening, or a few evanescent pimples, to that in which variola is unmitigated, and the inserted virus becomes confounded in the multitude of surrounding pustules. The following selected cases will illustrate this:—

Samuel Barrow, vaccinated at five months old.

Small-pox has been in the house for eight or nine days, and has been fatal to two persons.

8th day.—Vesicles quite regular; no sickness nor eruption.

13th day.—Quite regular, with areola; has had some sickness and fever, but is now quite well.

David Jenkins, vaccinated at three months.

Small-pox in the house.

4th day.—Vesicle regular, but much erythematous inflammation over the whole arm.

8th and 11th days.—Vaccination quite regular; no eruption.

Eliza Crop, vaccinated at fourteen months.

Small-pox has been in the house some time.

10th day.—The vesicles have filled, but there is neither hardness nor areola.

13th day.—The vesicles are scabbed over, but still quite loose in the skin, without areola. The child is feverish, and has a sprinkling of small-pox pimples.

16th day.—A scanty eruption of small-pox. The vesicle has a yellow scab, and remains without areola.

William Pooly, vaccinated at eleven months.

The vaccination proceeded to the 10th day without areola, and was followed by a copious eruption of small-pox. The vesicle dried up without areola.

Matilda Mumby, vaccinated at eight months. Small-pox next door.

5th day.—Regular.

8th day.—Regular, but the child has been sick, with a few spots on the body.

10th day.—No areola on the vaccine vesicles. The variolous pustules remain.

12th day.—Areola now perfect. Pustules nearly gone.

14th day.—Much areola, and the vesicles quite correct.

The child is quite well.

Jonathan Gibbon, vaccinated at six months.

8th day.—Vesicles regular, but the child has sickened with small-pox.

10th day.—Vesicles large, and now purulent; no areola.

Edward Dyson, vaccinated at two years. Small-pox has been in the room for six days.

7th day.—Vesicles regular.

10th day.—Has had much sickness, inflamed eyes, and many small pimples. Vaccine vesicle nearly stationary.

11th day.—Vesicles slowly advancing, with some areola, but still loose and flabby in the skin; eruption remains.

12th day.—Vesicles now quite correct; eruption gone.

The last cases of this kind that I shall mention are the three following, which occurred in the children of one family, occupying a decent apartment over a large livery-stable. An elder child had lain ill with small-pox in the same room for many days. The mother was within a week or ten days of her full time.

Henry Smith, vaccinated at two years and a half old.

8th day.—The vaccine vesicles too much advanced, irregular in shape, with much surrounding inflammation, and the contents purulent. The child is ill.

10th day.—Two or three pustules appear on the face, but the sickness has subsided.

11th and 12th days.—The pustules have disappeared, the child quite well, and the vaccine vesicles dried up.

Susan Smith, vaccinated at four years and a half.

8th day.—Has sickened with small-pox. The vaccine vesicles flat, pustular, and without areola.

9th to 13th day.—I have seen this child daily. The small-pox proceeded uniformly, as if vaccination had not been performed; the pustule distinct; the face swelled; eyelids closed. The child did well, and the variolous eruption subsided at the usual time. The vaccine vesicles became *pustules*, not to be distinguished from the variolous, and never shewed any peculiar areola.

The Infant.—This infant having been born in the midst of small-pox, and in the very bed in which it had existed for a considerable time, I resolved to vaccinate without delay. I accordingly did it thirty-six hours after birth, which is the earliest case I have to record. This went on in a very regular progress to the 9th day, when there was a small but not satisfactory areola. On

the following day it sickened, and small-pox eruption appeared. During the whole of the following week, at which time I saw it daily, the variola advanced with perfect regularity; and the pustules, which were numerous, only began to turn on the 21st day. The child did well, and the vaccine vesicles dried up with a yellowish crust.

From the preceding cases, and others of a similar kind, which I have omitted, it would seem that the vaccine vesicle, when once fairly established, has a pretty strong tendency to proceed with regularity in a person infected with variola, till the period at which the surrounding hardness at the base and areola would naturally appear; that is to say, about the 9th or 10th day of vaccination,—a period which may be supposed to correspond with that of full maturation of small-pox. Then, if the eruption of the latter disorder has not yet appeared, or is scarcely established, the inoculated vesicle remains stationary, continues pale at the base, and, in particular, *lies loose and flabby in the skin*, which I think a very characteristic mark of the approaching interference of some other disorder; for it is not confined to variola, as the presence of measles and other diseases will produce the like effect. When, by this delay of the vaccine progress, the variola has, as it were, overtaken the other, they proceed, probably in proportion to their respective intensities, and either the vaccine vesicle completes its course alone, with late areola and scabbing; or it is overpowered by the variola, becomes pustular, and no longer to be distinguished by any of its peculiar characters.

If, on the other hand, variola appears so early in vaccination as to be from the first nearly equally advanced in progress, the vaccine disorder gives place to the other, and never resumes its distinguishing features.

Parents bringing children from infected houses often ask,—whether it is worth while to vaccinate till the event of the infection is known? To this, of course, every practitioner would answer in the affirmative, and even urge it as an additional reason; for all experience shews, that persons exposed to a continued source of infection fall under its effects at very different periods, or sometimes escape altogether; and vaccination, even if it totally fails to mitigate small-pox, does not appear to make any appreciable addition to the danger or suffering.

The opportunity does not often occur in town practice of noting the precise time of the reception of small-pox infection, nor (as depending upon this question) the latest period in its progress at which vaccination may be expected to interpose its protecting power. Doubtless this is modified by the intensity and activity of the variolous infection. In the case of the new-born infant which I have given, it will be seen that a delay of thirty-six hours was sufficient to defeat the object of vaccination, though it had advanced to the 9th day before variola appeared. It is impossible to conceive a greater concentration of infection than in this case, where the room, the bed, and the person of the mother, must have been saturated with it at the time of birth.

Interference of Chicken-Pox with Vaccination.

The genuine varicella is allowed, I think, to differ from variola in these particulars: — The eruptive fever is usually (though not always) less severe, without soreness of the throat or swelling of the face; the eruption consists of watery vesicles, scarcely ever becoming purulent, the cuticle of which is extremely thin, so that it is almost always broken in the doublings of the skin by the mere friction of the body; it generally extends upon the scalp of the head; has a much shorter course than variola, so as to dry up in dark brown crusts in about three days, but is followed by successive crops for a week or more, and seldom any pitting is left, except when the pustule has been teased into a small abscess by constant picking.

But, on the other hand, the pustules of undisputed small-pox, when modified by successful vaccination, often bear a close resemblance to varicella, in the shortness of their course, their semi-lymphatic appearance, and the well-defined brown crust with which they dry up. Frequently children are brought for inspection, either under vaccination, or some time afterwards, with an eruption of this kind, coming perhaps from a neighbourhood in which chicken-pox is very rife, but also at all times exposed to variolous infection by being carried about with their mothers into shops and other places of resort. Fortunately the disorder is of little importance, and re-

quires little if any medicine; but if the practitioner gives a confident opinion, whether it be small-pox or chicken-pox, he will much oftener, I think, satisfy his patient than himself.

Genuine varicella appears to me to interfere much less with the progress of vaccination than variola does. The following cases will shew this:—

Joseph Presnall, vaccinated at eight months.

8th day.—The child came out with chicken-pox the day after vaccination, which has left many brown crusts on various parts of the body. Vaccine vesicles rather flatter and paler than usual.

10th day.—Quite regular, with areola.

W. Ireland, vaccinated.

3d day.—Has a full eruption of varicella.

8th and 12th days.—Vaccine vesicles quite regular, with areola. The chicken-pox has subsided.

Charlotte Clegg, vaccinated.

10th day.—Is full of varicella, as are two other children of the same house. Vaccine vesicles inflamed, with areola, and quite regular.

William Edwards, vaccinated.

5th day.—Is full of varicella, as are three more of the same family, who, the mother says, had natural small-pox two years ago.

8th day.—Varicella still remains; vaccine vesicle correct.

In these cases, which it is needless to multiply, I consider the eruption to have been genuine varicella; and by comparing them with the variolous interference, it will be seen how differently they affected the inoculated disorder. I have vaccinated with success a month after the decline of varicella. Every one knows, that in the course of previous life, variola does not protect against varicella, nor *vice versâ*.

Interference of Measles with Vaccination.

The following illustrative case I must give more at length.

Martha Ingram, vaccinated at two years and a half.

The child sickened of measles on the sixth day after vaccination, and had the disorder severely. The vaccine vesicles continued to fill and have their usual appearance to the twelfth day, except that there was neither hardness nor areola.

14th day.—Vesicles almost dried up; no areola.

15th day.—Vesicles more active, larger, and with some surrounding inflammation.

16th day.—Vesicles spreading in dimensions, fuller round the base, and hard.

17th day.—Vesicles very large; scabbing in the middle, but full of fluid at the margin; flat, nearly of natural appearance, with areola.

18th day.—Inflammation subsiding; vesicles drying up.

Daniel Ginman, vaccinated at one year and ten months.

3d day.—Is full of measles; vesicles red, inflamed, and nearly pustular.

8th day.—Vesicles nearly dried up.

To be again vaccinated some months hence.

George Reynolds, aged 18 months. Is just recovering of measles, and still very ill; but small-pox being in the house, I vaccinated him.

8th day.—Vesicles nearly regular, but very flat, with scarcely any lymph.

10th day.—No areola, but in other respects correct.

12th day.—A small but well-defined areola.

The first of these cases is interesting, as shewing the total suspension of the vaccine vesicle at the point at which it is usually suspended by any interfering disorder—that is to say, when it has filled with fluid, and is preparing to shew the characteristic hardness of the areola. After nearly drying up, the vesicles resumed their activity as the measles declined, enlarging considerably, and were at their full height about the sixteenth day; being a suspension of six days beyond the natural term. In the second case, the measles appearing only two days after vaccination, the latter was entirely degraded, and its course totally arrested. In the third case, the child was saved, by vaccination, from that common and most dangerous accident of small-pox occurring just on the recovery from measles.

Interference of Hooping-Cough with Vaccination.

Daniel Ackerman, vaccinated at 13 months.

6th and 8th days regular.

10th day.—This child has now sickened of hooping-cough. The vesicles large and full of lymph, but flaccid, and without areola.

15th day.—Vesicle rather pustular, pale, and flaccid.

22d day.—The child has been brought from time to time. The fever of hooping-cough has gradually subsided, and the vaccine vesicle assumed the proper areola, which lasted three or four days. At this time it is much larger than usual, and nearly dry.

Sarah Keller, vaccinated at three months.

4th day.—An incipient effort, but subsided in two days.

As in the case of measles, the vaccine vesicle was only suspended by the accession of hooping-cough on the eighth day, but entirely extinguished by its earlier appearance in the second case.

The advanced stage of hooping-cough does not appear to retard or modify hooping-cough in any way whatever. The lateral extension of the vaccine vesicle when retarded, but waiting for the period of its full maturation, bears some analogy to the enlargement of the pustules of confluent small-pox, under similar circumstances.

The reinsertion of vaccine virus, taken from a vesicle already in progress, as first practised by Mr. Bryce, affords a very valuable test of the progress of the disorder; and though not used in all cases, is especially of importance in those (which are not unfrequent) where from indolence of bodily habit, or perhaps from inactivity of the virus, the first inoculation proceeds too languidly to be quite satisfactory. Frequently children are brought on the sixth or eighth day, with perhaps only a single, very small, but regular vesicle, out of six or eight punctures. In such cases I generally repeat the vaccination from its own vesicle, and if the patient returns in two or three days with an equal areola round all the vesicles, the later as well as the earlier, I consider the sum of effect as satisfactory.

There is one circumstance attending re-vaccination which I cannot understand: it is this—a child will sometimes be brought on the eighth day, and the vaccination will have totally failed, so as not to leave a vestige of the punctures, and will be then re-inoculated. But on the eighth day of the second insertion the vesicles will have the full areola, and in every respect equal to the tenth day's progress, the original punctures remaining quite closed, and never shewing any effect whatever. This has happened to me so often (though by no means invariably) that I can hardly attribute it to accident; and if not, it would seem to shew that a puncture, apparently abortive, may nevertheless exert some degree of activity upon a second and more successful inoculation. I should be very glad to learn if the same has occurred to other practitioners

There exists with many persons a prejudice (for prejudice it certainly is) against opening the vaccine vesicle, which keeps them away from the station after their own purpose is served. As far as I have observed, the Irish poor have this opinion; and it seems to be nearly universal with all the Jews whom I vaccinate, for scarcely one of them will ever attend a second time if their own is successful. The reasonings of the humoral pathology still hold their ground with the multitude; there is still a considerable prejudice in favour of a copious eruption of any disease, the essence of which is supposed to be that of cleansing the body by throwing out noxious humours; and hence, when for the sake of lessening the risk to life they submit to the stinted allowance of two or three vesicles, *it stands to reason*, they urge, that these ought to be allowed to pursue their course without being emptied or disturbed.

Sometimes, however, an opposite opinion prevails; and the mother, knowing by experience the great relief produced by pricking a blistered finger with her needle, is anxious to have the same performed on the vaccine vesicle with the lancet.

Probably neither party would be so well satisfied with the simple truth, that where tolerable care is taken, puncturing the vesicle does neither harm nor good—does not increase the subsequent inflammation, nor in any way disturb its further progress.

The frequent occurrence of small-pox after vaccination, has led some to conjecture that the vaccine virus is losing its power, by gradually becoming milder, and more exclusively a local disease. As far as my experience goes,

which now extends to full thirty years, the progress of the vaccine vesicle is now, in every respect, the same as at first, both in the cases that have always been considered as satisfactory and in those where the interference of other disorders renders the result imperfect. Mr. Bryce's test of re-vaccination is as unfailing as ever, and it is difficult to conceive how the effect of any inoculated virus should be merely local, when, by its presence and during its progress, it assimilates to itself and shortens the course of its own virus, inserted in a distant part of the body.

With regard to the proportion of cases in which vaccination fails to protect against small-pox (reckoning any degree of variola a failure), I do not see how it is possible to arrive at any tolerable accuracy from the result of indiscriminate public practice in this metropolis. The inquiry must, of necessity, extend to a number of years, since many years have generally elapsed between the vaccination and the subsequent failure, and a vast number of the subjects will have been the children of artisans, who seldom occupy more than one apartment or one floor of a house, and are constantly changing their abode. In the slighter failures, very few of these will take the trouble to afford the surgeon an opportunity of personal examination, at the only time at which it would be of any avail.

To the poor, the peculiar advantages of vaccination are, its introducing no contagion into their crowded dwellings; its uniform mildness as a disease, rendering it unnecessary for the parent to suspend profitable occupation to watch the ailing child, or to devote any of the earnings of labour to provide medicines and sick-bed comforts, or, when these fail, to meet the heavier expenses of decent burial. Nor are they insensible to the advantages of comeliness of person, which has so often been impaired by the ravages of small-pox; and I have never heard those who, as mothers and wives, have undergone the trying duty of nursing a husband or a child through the severer forms of this loathsome disease, speak lightly or disparagingly of Dr. Jenner's invaluable discovery.

I am, sir,
Your obedient servant,
C. R. Aikin.

Great James-Street, Feb. 5, 1834.

RETROVERSIO UTERI.

To the Editor of the Medical Gazette.

Sir,

The insertion of the following will oblige yours respectfully,

R. P. Bamber,
Surgeon.

Manchester, Feb. 4, 1834.

Mr. Sherwin, in your last number, has happened to hit upon a fact of some importance to himself and the profession in general. In the first case of retroversio uteri which occurred to me, I was unable to introduce the catheter until I had elevated the fundus uteri. This induced me to attempt the cure of the retroversion, by introducing the finger into the vagina, and by using gentle pressure until the fundus had receded. I have adopted the same practice in every subsequent case, with the most complete success, the patients being restored to their usual state of health without any return of the complaint. There is, therefore, no occasion for the aid of either *husband* or *nurse* as deputies for the accoucheur; and an extended knowledge of this prompt yet simple treatment, may supersede the palliative mode mentioned by Mr. Sherwin, and which is yet adopted by many medical men.

MEDICAL GAZETTE.

Saturday, February 15, 1834.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

PROPOSED CHANGES IN THE COLLEGE OF PHYSICIANS.

A few weeks ago we laid before the public an outline of certain changes which it was proposed to make in the constitution of the College of Physicians. The statement was immediately copied from our pages by certain worthy contemporaries, without any reference to the source of their information; and that which we only announced as "pro-

posed" changes, they assumed as things established — one even quoting our words as the language of some official document procured elsewhere. By this unfair use which has been made of our announcement, the medical public has been misled; and we therefore think it right to state, that no definite arrangements have been made, or are likely to be made, at the present moment; so that ample time is afforded for discussion, both within and without the walls of the College *.

The benefit which might accrue from such discussion, if temperately and candidly conducted, in bringing the Fellows and Licentiates to some understanding as to what it would be just and reasonable for the one to concede, and the other to accept, must be obvious. Some general principle, however, we suspect, is all that discussion will ever effect, if even thus much be accomplished; for we hold it to be impossible to devise any concession so small, but that it would be looked upon by some of the Fellows as having tainted the sacredness of their order, or to plan any measure so general and comprehensive as to please all the Licentiates. The object ought to be, to do what is right, not what will appease the clamour of a few noisy and interested declaimers; it is with a view to the interests of the public, and the honour and credit of the profession—not to the feelings of a party—that legislative measures ought to be framed. It is in this spirit, we would fain persuade ourselves (alike different from that of the unbending conservatives and mere levellers), that the remarks we have at different times made upon the questions at issue have been penned.

Now, in giving our best and most dispassionate attention to the proposed changes detailed in a former number, we must say that they are, in candour, to be received as indicative of a more liberal and conciliatory spirit than any previous suggestion which has emanated from the same quarter; but that they are, nevertheless, in some respects objectionable, and in others defective and incomplete. That which may fairly be stated to indicate liberality, is the proposal that the graduates of Oxford and Cambridge shall not, as a matter of course, be admitted, nor those of other Universities, as a matter of course, be excluded; but that all shall be placed in a state of probation, if we may so call it—the term being very properly longer for Scotch than English graduates, but rendering both at its completion equally *eligible* to the Fellowship. Again, that which may be regarded as objectionable, is the manner in which there is every reason to conceive that this eligibility will be acted upon; and, lastly, the incompleteness of the measure resides in failing to relieve the Licentiates from certain minor grievances—such as their obnoxious designation, and their exclusion from the library and museum of the College.

If our information be correct,—and what is still more important, if parliament does not meantime save the College all further trouble about the matter,—it is contemplated that such number as may be necessary to keep up the governing body, shall be annually, or at certain other times, added to the list of Fellows. Added by whom? Of course, by the Fellows themselves; and the idea is, that the mode of doing this will consist, not in a succession by seniority (in the absence of any thing decidedly objectionable in the party), but by selection and ballot. Now it is not difficult to anticipate, that a preference will be given to English graduates from two very powerful causes—one a defensible reason, and the other a pardonable feeling:—first, because as a body they

* The statement in the Morning Herald, a few days ago, that the consideration of the measure was on Saturday last postponed till that day six months, is incorrect: it was only adjourned till the next meeting of the Comitia Majora in March.

are better educated men, and, secondly, because those with whom the decision rests being, with few exceptions, *alumni* of Oxford or Cambridge, have their habits, their prejudices, and perhaps their interests also, engaged in the result. The consequence of this would be, we apprehend, that younger English graduates would constantly be placed over the heads of older and equally accomplished candidates from beyond the Tweed; and if so, we need scarcely say the intended change would entirely fail as a measure of conciliation.

There is one method by which the wrath of the Licentiates, which would thus be engendered, might he rendered unimportant; and that is, at once admitting all really respectable men among them, of a certain standing (say ten years), and subsequently continuing to elect with fairness those whom, by their own statutes, the College are assumed to have previously declared to be eligible. In this way—that is, by excluding only those who are positively and obviously objectionable—the College would soon acquire the character of embracing all respectable physicians, and the others might be noisy, indeed, but would be powerless. If, however, a limited number only of the Licentiates be annually elected, and those chiefly from among the English Graduates, then the position of the Licentiates would only be changed in this—that whereas, at present, their failing to obtain the Fellowship is understood to be merely dependent on the place where they were educated, constituting a *negative* usage, but, on the contrary, if the proposed plan be adopted, then the circumstance of their remaining Licentiates would be the manifest result of an implied inferiority, tested by an election, and amounting to a *positive* exclusion. It would be much better for the Licentiates, and received as a much greater boon, if the term of probation were to be doubled—provided their accession to the Fellowship were even then to be placed on a footing in spirit and in fact, as well as in words, with that of the English graduates.

It would seem that the number to be added to the "Fellowship" is to be regulated by the number deemed necessary to keep up the governing body. But we submit that the Fellows are already too numerous for a mere "governing body," while they are not numerous enough to overwhelm the struggles of their discontented subjects by their moral preponderance. At present the parties are too nearly equal in numbers, and too much opposed in interests, for the government to be very powerful or the subjects very tranquil. It appears to us, that if the Fellows are to be a limited body, entrusted with the government of the corporation, as the above idea would imply, then they ought not to be self-elected: at all events, not farther than this—that on a vacancy occurring, they should have to choose between two or more candidates presented to them by the commonalty of the College—as is the custom at present in various municipal corporations, in electing a mayor. If they are to continue a self-elected body, then the constitution of the corporation ought to be that all who have complied with their regulations, so as to become eligible, should, at the end of their probation, be admitted, unless there be something positively objectionable to the individuals; in which case, a power of exclusion, rather than of election, might be exercised—such as occurred very lately in the Temple, among our brethren of the long robe. We must not, however, conceal that one formidable objection to this free admission to the Fellowship at the present period, is to be found in the want of due qualification on the part of some of the Licentiates. But this, again we assert, is the fault of the College, who ought, long ere

now, to have established a curriculum of education, and required an extent of professional learning and respectability of character, such as should have shut the door against some of its present Licentiates—aye, we submit, and against some of its Fellows too. Still the laxity has been greater with respect to the former—so great as sometimes to have led to the suspicion that the Fellows had in view to maintain indirectly the elevation of their own order by the depreciation of the other. There are those among the Licentiates who know and feel that by nothing short of breaking open the doors can they hope to gain admission within the walls of the College of Physicians; and hence no measure which recognizes any superiority of rank will ever meet with their approbation.

There is one change which we presume might easily be made, whether any of the others be or not: the Licentiates, instead of being "alieni homines," might become "homines consociati." As Sterne says, "there is much in a word:"—*permissi* implies nothing above toleration; and "licentiate," to say the best of it, is not a very complimentary term. A *license* is what is granted to publicans, players, and pedlars. The language might afford something less plebeian for the profession of physic; and if there are to be two grades—which, unless the scale of qualification be raised very much for all, must unquestionably be the case—why not call them *socii* and *consociati*, fellows and *associates*, or some such designation? It may be said that this is prejudice on the part of the Licentiates: still, if it exists to such an extent as to constitute a grievance in their eyes, why should the College hold out about a word? The same power that introduced the term can change it; for it is not "in the bond," and does not occur in any part of the original charter.

Another point which would be looked upon as a graceful concession and liberal act, is annulling the by-law which prohibits Licentiates from being admitted to the library: the exclusion is really paltry, and unbecoming the spirit of the age. Some say, pooh! the library is not worth being admitted to; and others add, besides, that no Fellow would refuse an order if asked for it. The first we believe to be very true; and we may remark that it might have been very different if a small annual contribution from those now excluded had been appropriated to the purchase of books—to say nothing of the donations to which such an arrangement would probably have led. The question, however, is not whether the library and museum be good or bad—but relates to a matter of courtesy and feeling, if not of positive right. The College of Surgeons admits its commonalty to the library and museum in Lincoln's-inn-fields, and yet it is not reputed to be the most popular and liberal corporation in the world! But the Fellows of the College of Physicians assume that the Licentiates are inferior to them in learning; and then, instead of being moved with compassion by their alleged ignorance, and instead of respecting and encouraging their thirst for knowledge, they unfeelingly shut their hearts against their importunities, and their doors against their persons. Nay, more: the Licentiates of the College of Physicians are admitted, and we believe admitted *quasi* Licentiates, to the use of the library, and to certain other privileges, by the College of Surgeons, which they are denied by their own corporation—we beg pardon—by the corporation of their own brethren, in Pall-Mall East. As to the other answer—namely, that any Fellow would readily give an order of admission—we shall only remark, that it is the necessity of *asking* which constitutes the essence of the grievance.

We earnestly hope that all these sources of heartburnings and ill-will will speedily be removed, and that the

Parliamentary Committee *which is now sitting* may place the medical profession on such a footing as shall conduce to the interest of science and the welfare of the community.

HUNTERIAN ORATION.

Mr. Lawrence, yesterday evening, delivered the anniversary panegyric at the College of Surgeons, to one of the most crowded theatres we ever remember to have seen. After briefly noticing the founders of the oration, Dr. Baillie and Sir Everard Home, Mr. L. entered on a favourite topic — the unity of medicine, with its *practical* divisibility. The principal incidents in the life of Hunter were then mentioned, and his genius and his industry were enthusiastically described. This naturally led to an account of his unequalled Collection, and the additions made to it by the College, — which, it appears, will occasion the Museum to be rebuilt, and such enlargements to be effected in the whole structure in Lincoln's-Inn-Fields as will put it above any other similar establishment in Europe. Mr. Lawrence maintained that there could be no parallel drawn between John Hunter and any other physiologist and surgeon who had ever lived: he, however, reviewed the labours and achievements of several great men with whom Hunter had been compared. Among them, he was most happy in delineating the greatness of Cuvier; who, however, did not labour in the same field as Hunter, and never, perhaps, had a rival in the world, except Aristotle, Linnæus, and Buffon: to the latter two of whom he was decidedly superior. In noticing some of the contemporaries and followers of Hunter, Mr. Lawrence paid a beautiful tribute of respect and admiration to Mr. Abernethy, his late illustrious master, and called the attention of the audience to a fine bust of him (by Chantrey), which was that day, for the first time, placed in the theatre. The conclusion of Mr. Lawrence's address, alluding to the never-dying fame of Hunter among the worthies of Britain, was extremely eloquent, and was followed by acclamations and cheers, which lasted for several minutes.

DR. F. H. RAMSBOTHAM IN ANSWER TO MR. WAKLEY.

To the Editor of the Medical Gazette.

Sir,

A statement has appeared in the last number of the Lancet, coupled with my name, conspicuous for that peculiar talent for misrepresentation with which the Editor of that periodical is so eminently gifted. If you deem it worth refutation, you are at liberty to make whatever use you please of this letter.

After endeavouring to justify the unwarrantable act of writing a fictitious letter, and appending to it the signature of another person, and treating this species of mischievous *forgery* (I use your term, for I cannot find any milder which will convey my idea of such a fabrication) as an excellent joke, the Editor proceeds to state—as a proof that no ill-feeling continued to disturb my mind—that within six weeks of the appearance of this "squib," being present with Mr. Luke, at one of the public meetings of the electors of Middlesex, held during the canvass for the office of coroner, I took an opportunity, when the meeting was over, of assuring Mr. Wakley that he was wrong in supposing the officers of the London Hospital were hostile to him; and that I concluded the conversation by shaking him warmly by the hand.

As for the observation in the first part of the sentence, I can assure the Editor of the Lancet, that nothing he can say or do will ever for one moment disturb my peace of mind; and I have good reason for believing that I am by no means singular in this feeling, as there are very few respectable practitioners of medicine throughout the kingdom who care not a rush for any slander or abuse which he may heap upon them.

The second part I must not pass over so cursorily; and the following is my version of the story. I was induced, for reasons not necessary to trouble you with, to attend a meeting of the electors at the period Mr. Wakley mentions, and I persuaded Mr. Luke to accompany me. Mr. Wakley, in the course of his address, professed to relate the case of a patient treated at the London Hospital, and embellished his narrative with gross misrepresentations, interspersed with no gentle aspersions on the professional

character of those who had the conduct of the case.

He was here interrupted by Mr. Luke, who declared, in the most unequivocal language, that the statement was untrue. This declaration immediately drew the eyes of all assembled upon him; and Mr. Wakley was informed who it was that had interrupted him, and that I was present also. With his usual tact he then relinquished the subject he had been so fluently descanting upon—commenced a fresh tirade against the medical officers of the Hospital for the assistance some of them were rendering to his opponent Mr. Baker, and concluded by saying that the reason of their personal hostility to him evidently proceeded from a dread of the exposure of abuses that would follow his election.

On this I thought it right to say that I believed the medical officers of the London hospital cared nothing about Mr. Wakley, personally, either one way or the other,—that, for myself, I had never seen him till that day,—but that I knew they were opposed to the principles on which the publication avowedly edited by him was conducted; and that I, with others, considered the person who could pen such articles as constantly appeared in the Lancet a very unfit man to hold an office of such responsibility and authority as that of coroner.

A few minutes after the breaking up of the meeting, Mr. Luke and I were standing in conversation outside the door of the house in which it had been held, when Mr. Wakley came out, and on recognizing us addressed a few words to Mr. Luke, which called forth a reply to the effect that he (Mr. Luke) thought the coroner's office ought to be filled by persons of rather a different stamp from those who usually obtained it, and that every candidate ought to possess some medical as well as legal knowledge. In this sentiment I concurred.

Mr. Wakley instantly declared he was very glad to hear us acknowledge so much, suddenly seized a hand of each (which we certainly had neither of us ever contemplated offering), then jumped into a cabriolet that was waiting for him, and left us, not a little astonished at his assurance.

I have spoken to Mr. Luke on the subject of Mr. Wakley's remarks in the Lancet of last week, and he, as well as myself, has a perfect recollection of what took place on the occasion referred to,—the sum and substance of which I have given above.—I am, sir,

Your obedient servant,
FRANCIS H. RAMSBOTHAM.

14, New Broad-street,
Feb. 14, 1834.

CLINICAL LECTURE

ON

DISEASES OF THE FIFTH PAIR OF NERVES.

Delivered at the Middlesex Hospital,

BY SIR CHARLES BELL.

I PROMISED you a clinical lecture on the diseases of the fifth pair of nerves, in continuation of that upon the portio dura of the seventh. I think that you followed me on the last occasion, and at least saw the confusion that had reigned over the subject of the nerves. You comprehended the principle which is to extricate us out of that confusion, which I stated to be this: a nervous thread has the same function through all its length; and whatever its endowment may be, it receives that endowment from its connexion with the particular part of the brain or spinal marrow from which it is derived.

This seems very simple; but what say you to the term *common sensibility*? It was a very general notion heretofore, that the sensibility possessed by all creatures arose from the delicacy of their texture. You find the expression even in Mr. Hunter's works, that there is a certain sensibility necessarily resulting from the texture of the animal's body, and common to every part of the body. Now there is no such thing as all this; there is neither a common sensibility, nor are there common nerves. From these apparently harmless expressions, as if all nerves had something in common, and possessed sensibility, and performed their distinct offices by an appropriate organization of their extremities, arose the confusion which reigned over the whole system. When you made a proper dissection—I am speaking to anatomists—when you followed the nerves of the face, the nerves of the neck, the nerves of the thorax; or, as was the custom, put the subject into spirits to continue the dissection, labouring and studying for months, and brought it out of the tub, what inextricable confusion there seemed to be. Then came a report from some one, per-

haps Walther of Berlin, or Scarpa of Pavia, or Fischer, of a new nerve, or a new ganglion, or a new branch, or a new connexion, having been discovered. But the discovery of new nerves, or new relations, when there was no system and no clue to the labyrinth, only added to the inextricable confusion.

Now the first principle to be attended to is, that there is no such thing as *common* sensibility. The sensibility of the skin is one thing, the sensibility of the surface of the eye is another; the sensibility of a third part, as the throat, differs again from these; the sensibility of internal parts differs from the sensibility of external parts; and each degree and kind of sensibility is benevolently bestowed for a definite purpose. The textures of the frame would be destroyed by our common occupations, were they not guarded by a power better calculated to preserve them than if we were defended by threefold brass,—sensibility to injury; that sensibility which is in the skin, and which animates us when any thing pricks or tears; that sensibility, more especially, to the degree of heat which is around us. What would be our condition were we not thus kept continually upon the alert, and alive to the change of temperature in the atmosphere around us? What, I would ask you, is the condition of the paralytic? I speak to you who know well how frequently the paralytic comes into the hospital burnt. He sits over the fire; he does not know that the degree of heat is above what his leg or his arm can sustain, and the part suffers. Now to such dangers we should all be exposed, were there not wisely and benevolently instituted an appropriate sensibility in the skin to heat, warning us of the slightest changes in the temperature of the atmosphere.

When you compare the external and the internal parts, you find that it is not a common sensibility which they partake of. What would be your condition were the parts within and around the knee-joint, or the ankle-joint, as sensitive as the surface of the body? You would be creeping home as if you had inflammation in the joints; you could not walk, if the parts that were bruised in the motions of the body possessed sensibility like the integuments. On the other hand, what would be the consequence if there were no sensibility there? You would have no guidance as to the measure of your exertions; you would have nothing to tell you how much power, in using the limbs, was compatible with the texture of your body; you would be subject to injury, not from without, but from within—to rupture and to laceration. Thus you will ever find that the sensibility which is to guard the body is suited to the particular part. Take again, for example, the eye; there you have a sensibility not like that of the skin, not like that of the bone, or of a joint, or of a part situated internally, but yet it is of that exquisite degree which will be excited by the slightest motion of an insect's wing. You must have observed that you may put your finger on the surface of the eye without producing the degree of pain which a particle of dust, or a hair of the eye-lashes, will do. What would be the use of this lachrymal apparatus, the little stream that flows over the surface of the eye, this fine mechanism, by which the eye is closed and protected from the light particles floating in the atmosphere, unless there were not only a high degree of sensibility, but a sensibility of a kind suited to the impressions which these particles make. Light matters, which fall upon the hand, or skin of the face, and inform you of nothing, will, when they light on the surface of the eye, produce excitement, and a protecting motion of the eyelids.

Then again, it has been supposed that the different organs of sense are susceptible of their peculiar impressions, because of the delicacy of the extremities of their nerves. That is a great mistake; it is just the mistake belonging to the term common sensibility and common nerve. At this time there is an expression of approbation of an observation of M. Magendie's, running the course of the journals, and the systematic authors of the day: he tells you, that the sensibility of the surface of the eye to the needle of the oculist is one thing, but that the sensibility of the expanded retina is another; and that, when the latter is struck by the needle, there is a flash of fire. Now it is not very creditable to the class of men to whom M. Magendie is addressing this, that they should not know to whom this remark belongs; because it is not merely curious in itself, but interesting as associated by me with those other observations which have led to things of more importance. I should have expected that, when such a fact was announced by M. Magendie as his own observation, some friend would have tapped him on the shoulder, with a "doucement, tais toi, mon ami!—did you not tell us that you had a little English book in which this is stated?" From this work I will read you two paragraphs *:—

"In this inquiry it is most essential to observe, that while each organ of sense is provided with a capacity of receiving certain changes to be played upon it, as it were; yet each is utterly incapable of receiving the impressions destined for ano-

* Idea of a New Anatomy of the Brain, by C. Bell. 1811.

ther organ of sensation. In the operation of couching the cataract, the pain of piercing the retina with a needle is not so great as that which proceeds from a grain of sand under the eye-lid; and although the derangement of the stomach sometimes marks the injury of an organ so delicate, yet the pain is occasioned by piercing the outward coat, not by the affection of the expanded nerve of vision. If the sensation of light were conveyed to us by the retina, the organ of vision, in consequence of that organ being as much more sensible than the surface of the body, as the impression of light is more delicate than that pressure which gives us the sense of touch, what would be the feelings of a man subjected to an operation in which a needle were pushed through the nerve! Life could not bear so great a pain.

"But there is an occurrence during this operation on the eye which will direct us to the truth: when the needle pierces the eye, the patient has the sensation of a spark of fire before the eye. This fact is corroborated by experiments made on the eye. When the eye-ball is pressed on the side, we perceive variously-coloured light; indeed, the mere effect of a blow on the head might inform us that sensation depends on the exercise of the organ affected, not on the impression conveyed to the external organ; for by the vibration caused by the blow, the ears ring and the eye flashes light, while there is neither light nor sound present."

M. Magendie might have gone farther on the same authority, for I then extended my remarks to the other organs of sense, to illustrate the distinction in the functions of the different nerves. Suffice it then to say, that there is sensibility bestowed upon every part according to the necessities of the organ, and for the beneficent purpose of defending the delicate textures of the frame; and as to the surface of the eye, the sensibility which is conferred upon it has a relation to the protecting apparatus, so that the fine structure and transparency of the globe may be preserved; while the sensation of the retina is adapted to the varieties of light and colour only.

With regard to the term *common nerve*, we now see its incorrectness. So far from all the nerves being sensible, or all being endowed with the same sensibility, it is found that certain nerves have no sensibility at all. I recollect perfectly well the occasion when it occurred to me, that this might not merely be predicted from a comparison of the different qualities of the organs of the senses, but that it might be put to the test of experiment—by selecting the roots of the spinal nerves, touching one root with the point of a needle, and then touching the other, and thus ascertaining whether there was a difference in them or not. For when once it was ascertained that the nerves going out from the spinal marrow were—if you will continue to use the word—common nerves, because they had combined within them different sources of energy,—and when it was shewn that these different sources of nervous power resulted from their having different roots,—what had we to do next? Nothing more than to study the anatomy; and I repeat it, that the anatomy will never fail you. Experiments frequently fail, because they take a colour from the fancy; they suit themselves to the expectations of the experimenter. But anatomy is substantial: you will never be deceived if you attend to the anatomy of the nervous system, and consider thoroughly the functions of the organs to which the particular nerves are distributed. When it is ascertained that the spinal nerve has a double root and a double endowment from this double root, and is in this respect a common nerve, because it has two qualities combined in it by means of its roots, you have only to observe the columns from which the roots arise, and trace them up into the brain, to be satisfied of their correspondence throughout their whole course. From the column of nervous matter which gives rise to the nerves of sensation, you have only nerves of sensation; from the column which gives rise to the nerves of motion, you have only nerves of motion.

Then comes the inquiry, naturally arising out of these facts—What nerve in the head is like the spinal nerves; what nerve has two roots? You know well, that of all the nine cerebral nerves of Willis (you leave out the sub-occipital, or tenth, because it has a double root, and is a spinal nerve), that there is no other nerve in the head which has a double root but the fifth. Then you place the fifth and the spinal nerves in contrast; you mark the resemblance in the manner by which the roots arise; you observe the ganglion of the fifth, that it is totally different in structure from the ganglion of the sympathetic, for example; that while it differs from the ganglions among the visceral nerves, it has a perfect resemblance to the ganglion of the spinal nerve. The two roots, and a ganglion on one of the roots, the other passing over the ganglion, and keeping free of it:—what does all this imply, but at once, and in a single word, that the fifth nerve is a spinal nerve; that the fifth nerve is a nerve giving to the head the same compound properties which are given to the body by the nerves of the spinal marrow. The first time that I ever expressed this in writing, though I had often referred to it in lecture, was in the first paper which I gave to the Royal Society.

I called the fifth the nerve of sensibility to the face, to the cavities and surface of the head, to the tongue, and to the salivary glands, and the nerve of motion to the muscles engaged in manducation: in short, I shewed that it was the "nerve of mastication and sensation." The same nerve which you may find in the caterpillar going to the mouth. As the nerves and the chain of ganglions in these lower animals perform the office of the spinal nerves and spinal ganglions, giving sense and motion to the body, so do the ganglion and nerves around the mouth perform the office of the fifth nerve, giving sensibility and motion to their mouths, and the filaments around it. Such was my original idea. Here, in the highest link of the chain of animal beings, as in the lowest, the nerve is subservient to the same functions;—it is the nerve of taste, and of the salivary glands—of the muscles of the jaw, and of sensibility to the lips. When we had divided the fifth nerve in the ass, the animal could no longer feel with its lips, so as to gather its food, and all the motions of its jaws ceased. So that the anatomy of the human body, the experiments upon animals, and finally, our experience in disease, led to the conclusion, that from the most simple vertebrated animal up to the highest individual in the scale, the fifth nerve was to be considered the same nerve, and that it served precisely the same purposes in all.

The best way in which we can proceed, is to read a case of disease of this nerve; and I believe that we are indebted to the house-surgeon, Mr. Elwyn, for the drawing up of this case.

Case of Disease of the Fifth Nerve.

"Mary Ann Webb, at present in the hospital, is 57 years of age. She has experienced loss of sensation in the right side of the face and neck. It begins at the vertex, and extends as far as to an inch above the clavicle on the fore-part, and it reaches behind as far as to the vertebra prominens; so that the defect of sensibility is bounded by the median line. There is, however, one part above the parietal bone which, although it is deprived of sensation, is the seat of acute pain. The conjunctiva of the right eye is insensible, and there is a mistiness of the eye, from the surface being devoid of secretion. The sense of smelling is impaired."

I must observe to you, gentlemen, that it is not easy to say when the sense of smell is impaired. It appears that the narrator put ammonia to the nostrils. There is not much odour in ammonia: its stimulating effect upon the fifth pair is great, but not necessarily upon the first. Besides, it is very difficult to confine the impression to one nostril. The effluvia circulate backwards, so as to affect the other side of the cavities of the nose. You require to distinguish the sensibility which would excite sneezing—that is, the mere irritation of the schneiderian membrane, from the excited state of the olfactory nerve. You must have all experienced that a slight inflammation in the cavity of the nose destroys the power of smelling; but it does not make you less susceptible of irritation and sneezing: so that there is always the distinction to be observed between the sense bestowed by the appropriate organ of smell, the olfactory nerve, and the sensibility of the nostrils (appropriate also), which is bestowed by the fifth pair. But to proceed with the case. "The taste, and the sensation of the tongue in the right half, are also gone. In chewing, she places the food in the left cheek, for she does not feel on the other side. She uses her finger to remove the morsel from between the cheek and the gums, instead of the tongue; and when she swallows, she feels the broth or tea only on one side. The muscles of the jaw are apparently not affected."

I find, however, a note here by another hand, "not correct." You would naturally suppose that the muscles of the jaw were not affected, so long as the patient moves the jaw; but you cannot fail to observe that the muscles of both sides of the jaw close it; and the jaw may be closed when those of one side are quite inactive. The only way in which you can ascertain that there is loss of action in the muscles of one side, is by making the patient close the mouth, and then shut the teeth with a further effort, as it were to break something with the teeth; and then you will find that the temporal and masseter muscles rise up and become rigid on one side and not on the other. But as long as you try to ascertain it by the opening and closing of the mouth, the motion of the coronoid process of the jaw produces an apparent motion of the muscles which are inactive.

"A fit, occurring seven months ago, is said to be the cause of this woman's condition. When she recovered from the fit, she says that there was a deadness of the right side of the face, and a distortion of the countenance. However, the condition of the face became natural in the course of a few days; and she is unable to say which side was deprived of motion. She continued to be troubled with headache. The speech is not affected, though it was at one time; she felt some difficulty in pronouncing her words, and could not speak as fast as had been her manner before."

Now the first remark that I shall make on this case regards the acute sensation of pain in a part over the parietal bone, when all around it was insensible. I beg your

attention to this circumstance, which is apt to puzzle the inquirer, and greatly to distract the patient. When there is disease of the fifth pair of nerves at the root, the patient will tell you that there is exquisite pain in one spot, at the same time that she is quite insensible to injury of any kind upon the part. The explanation is this:—the disease embracing the root of the nerve, gives rise to pain, which pain is referred to the tactile extremities—that is, to the surfaces of the face or head to which the branches of the nerve are distributed. I can supply an illustration of this from your own experience. As we go round, you see a woman with disease of the rectum, attended with pain in the leg and foot. Now in that case the inflammation has engaged the ischiatic nerve in the pelvis, and the impression originating there is felt as if it were in the part to which the nerve is distributed.

The next circumstance of interest in the case, is the want of sensibility in the tongue. We are hardly aware of all the happy combinations in the motions of parts, or of the fineness of the sensibility which governs these motions, until there be some defect in them. You do not think, for example, of the necessity of a combination being established between the elevator of the eye-lids and the rectus superior of the eye-ball, until you see a little disagreement in their actions, or want of consent; then you find that the person, when he looks up, turns the pupil under the eye-lid, and sees nothing. You are hardly conscious how much you enjoy through the common sensibility of the tongue: I mean the sensibility to touch; for the tongue is not only sensible to taste, but sensible, in the most exquisite degree, to touch. The guidance of the tongue, and the action of its muscles, through the sensibility of the surface, is seemingly so simple an act of the will, that you never think of it as a combined operation of two distinct faculties. Yet it must be obvious to you, that if you possessed the motions of the hands and fingers, without the sensibility of the fingers, and thrust your hand into your pocket to take out a piece of money, you could not grasp it any more than if you took a pair of pincers for the purpose; that is to say, you want that relation which is established between the sensibility of the fingers and the motion of the hand. And this is the reason why certain metaphysical writers have mistaken the matter, and have said that the sense of touch is different from all the other senses; inasmuch as it is active, they say, and there is a property going out from the sensorium to the hand. Indeed, so there is; you do not merely feel through the sensibility of the points of the fingers, but you grasp by an effort, which is an influence passing outwards: but then it is not an effort of the sense of touch, strictly speaking: it is only an instance of the necessity of the muscular action combining with the proper exercise of the sense of touch. The same is exemplified in the tongue: the motion of the tongue is perfect in this case; the influence of the ninth pair of nerves is perfect; there is no difficulty in moving the tongue to the side of the cheek, but she does not know that the morsel is there. In other cases that I could read to you, the patient did not know that the meat was in the cheek till it became putrescent and offensive to others; but this patient, knowing that she is subject to have things lodging there, takes care to remove them; and she regularly puts in her finger, as she might her tongue, and displaces the morsel from between the teeth and the cheek.

The next thing that I should dwell upon here, is what I have already partly explained; namely, that the muscles of the jaw are not apparently affected. But I am not quite satisfied about this being correctly stated: I am afraid that the time is past for ascertaining the point quite satisfactorily, because, under the treatment of her physician, she has greatly improved in all her symptoms; yet I should like you to inquire whether the masseter and temporal muscles have not been affected here, as well as the sensibility of the skin.

But on the whole, in regard to this case, I am not satisfied that it is one of those pure cases of affection of the fifth pair, or that it is a disease merely of the trunk of the fifth pair. Disease in the nerve does not come on with a fit, which this did. You will observe that there is insensibility not only in that part of the body to which the branches of the fifth pair are sent, but further down, in the nape of the neck, and along the back and side of the neck. If you find that the insensibility precisely corresponds with that part of the surface of the head which you know from the anatomy of the fifth to be supplied by its branches, it is a fair inference, that it is the root of this nerve which is affected; but if you find that the insensibility extends beyond these boundaries, you must either conclude that the disease involves the root of more nerves than one, or that the disease is deep in the brain, so that it affects more than the fifth nerve. From the whole history of the case, I consider this not to be an affection of the nerves as they are going out through the base of the skull, but an affection of part of the brain itself.

Lesion of the Fifth Pair, from a Wound with a Shell.

I will now present an instance of disease

of the fifth pair of nerves, which will give you a correct notion of this subject. It is a case in which we had on a former occasion * to reason upon the symptoms only; but now, instead of looking to the probable causes of the symptoms, we have the dissection before us, and may therefore follow our course of reasoning more securely in an opposite direction. It is the case of a man named Windsor, who was a patient in this hospital. He was wounded on the head by a bomb-shell at Waterloo; that is the first part of his history: he recovered from this, but received a kick, while dressing his horse, on the same side of the head, and after this there was severe pain in the left side of the forehead and cheek. The next symptom was a loss of power of opening the left eye, and then the eye-ball became fixed, looking outwards, and he consequently squinted. This was very different from the condition of the woman who received a blow on the head and a fracture of the skull, and whose case I remarked upon when lecturing on injuries of the head. She looked inwards, and moved her eye and eye-lids; but Windsor's eye looked outwards, and was permanently fixed. The next thing that we find is, that by degrees the eye changed its position, and was presented directly in the centre; but the eye-ball was still motionless. The muscles of the face retained their power: he could frown, and knit his brow, and he could wink. If he held his eye-lids open, and you waved your hand before him, he winked with the eye-lids, but not with the eye-ball; that is to say, there was no motion of the eye-ball during the effort of winking. If you make the same trial upon the eye of one of your friends, holding the eye-lids apart with the fingers, and then threatening the eye with the other hand, you prevent the eye-lids from closing; but you will see, at the time that the motion of shutting the eye would take place if your fingers did not keep the eye-lid raised, that the eye-ball turns up. No such effect, however, took place in this patient; which shews that not only were the voluntary motions of the eye-ball gone, but that the involuntary rolling of the eye, which accompanies winking, was also lost. He complained of the uneasiness which the red light of the candle, seen through the eye-lid, gave him, as he sat at home at night. The surface of the eye was insensible to touch, so that drawing the finger along the eye gave him no pain; and it was only when he *saw* the finger approaching the eye, that he winked. The whole of the left side of the face which is supplied by the branches of the fifth pair of nerves, was deprived of sensation; and when he closed his jaws, the masseter and temporal muscles no longer bulged out, or became rigid, like those of the right side, but were wasted and flaccid. He retained his vision, which was remarkable, when the sensibility of the surface, and all the motions of the eye, were gone. Vision remained, but the pupil was dilated, and did not move with the variations of the exposure of the eye to light. He continued in this condition during many months; and notwithstanding the loss of sensation and motion in his eye, that organ preserved its natural transparency. Afterwards, he was seized with paralysis of the muscles of the left side of his face. The eye-lid being now deprived both of the power of being elevated and of being closed, remained in whatever position it was accidentally placed. Violent inflammation of the conjunctiva now came on, and a thick deposit of granulations covered the whole surface, obscuring, or rather totally destroying, his vision in this eye. After the lapse of some months, he recovered the power over the muscles of the face; but until his death, the pain and insensibility of the side of the face, and the loss of motion in the eye-ball, remained the same as when he first presented himself. I will now read the account of the dissection, which was made by Mr. Alexander Shaw, who attended the patient at his house, after he had ceased to be a patient of the hospital, and who drew up the case.

"Having turned down the scalp and prepared to saw through the skull, a remarkable contrast was observed in the appearance of the two temporal muscles. The temporal muscle of the left side was pale, thin, tendinous, and deficient in its due proportion of muscular fibres, whilst that of the right side had the usual red fleshy colour, and was twice as thick as the former. On comparing the two masseter muscles, the same contrast was presented: the right had the natural size, colour, and texture, while the left, on the other hand, was blanched in appearance, thin, and wasted. A considerable quantity of serum escaped from beneath the dura-mater; the superficial veins were turgid with blood; the ventricles were unusually large and full of serum, and the substance of the brain appeared of a darker colour than is quite common. Upon turning out the base of the brain from the skull, the first thing that attracted notice was that the left optic nerve had a dull and ash-grey colour, whilst the right was of the natural pearly-white colour. When raising the brain from the left side of the sella turcica, adhesions, apparently of some duration, were found between the brain and dura-mater; there was also increased redness of this part. Upon separating the adhesions,

* See a Clinical Lecture upon Diseases of the Nerves of the Head, by Sir Charles Bell, Med. Gaz. vol. iii., p. 337.

a tumor was exposed on the side of the sella turcica, and with the dura-mater stretched over its surface; its highest part was on a level with the sella turcica—it reached forwards to the foramen lacerum, which it entirely closed—it extended laterally as far as to the foramen of the meningeal artery, and posteriorly as far as the posterior clynoid processes. Thus the tumor occupied the whole of the cavernous sinus. Its texture was like that of cheese, but rendered tougher by an intermixture of fibrous structure. The pituitary gland was converted into the same kind of texture as the tumor, and appeared as if it formed a part of it, but its shape was not altered: so hard was it, that it could be cut in fine slices. The whole tumor was easily detached from the bone by using the handle of the knife, and the bone exhibited no appearance of disease. On examining the posterior nostrils with a probe, it did not appear that any part of the tumor was lodged there. The nerves which passed through the cavernous sinus—the third, the fourth, the fifth, and the sixth pairs—were imbedded in the substance of the tumor; the optic nerve passed over it. All these nerves, between their origin from the brain and the tumor, were of a dull grey colour, and were diminished perceptibly in size, and formed a contrast with the nerves of the right side. The nerves of the left side which were not imbedded in the tumor—that is, the seventh, eighth, and ninth pairs—possessed their natural and healthy appearance."

In the first place, you observe from this dissection, that the tumor embracing the fifth nerve gives at once a proof that the want of sensibility in the surface of the eye and surface of the face, and internal cavities of the nose, inside of the mouth, and side of the tongue, was owing to the interruption of the functions of the nerve by the pressure of the tumor on its trunk. The pain in the side of the forehead (a part which was insensible) is to be accounted for by the inflammation and the disease making progress in the nerve itself. The worst case of this kind that I ever met with, was where a small tumor invested the popliteal nerve: the man actually died of pain — pain in the sole of the foot. Here, in Windsor's case, from the disease engaging the nerve on which the sensibility of all the surfaces of the head depends, the sensation of pain was referred to those parts to which the extreme branches of the nerve are distributed, although these were perfectly insensible. Then you find that the tumor made its progress to the nerves which enter into the orbit by the foramen lacerum. It first involved the third pair of nerves; because, you recollect (and it is very remarkable), that the eyelid dropped, and the eye-ball could not be moved, and the pupil was directed outwards. How was that? Why, the anatomy would tell you. This tumor gradually increasing, first involved the third pair, the motor oculi, and left the sixth pair out of its grasp for a time; so that the sixth pair, and consequently the abducens muscle, retained their power, while that of the other muscles was lost. Thus it was, that instead of the eye moving in all directions, it was moved only in one; and there being no opponent to the action of the abducens, the eye remained looking outwards. But at length the tumor amalgamating with, and extending itself to, the neighbouring parts, encroached on the sixth nerve also, and produced on it the same effect which it previously did on the third pair: the abducens muscle was then rendered as feeble as the rest, and all the muscles being paralysed, and no one having the preference, as it were, the eye was brought to the centre of the orbit, looking straight forward, but fixed.

It is stated that the power of shutting the eye remained. Certainly; because it has been discovered that the fifth has no direct influence over the muscles of the eyelid; the branch of this nerve on the forehead is a nerve of sensation, and not of motion. A circumstance occurring to me in practice well illustrates this. I cut across the branch of the fifth upon the forehead of a nobleman. It had no effect at all upon the motions of the forehead. In the consultation which followed, it was said, "He has not cut across the nerve; there is motion of the forehead—motion of the eye-brow." See, then, how important it is to ascertain which nerve gives motion and which gives sensibility. What was it that encouraged so many friends of my standing to cut across the branches of the fifth nerve for tic douloureux? Because it was attended with no distortion of the countenance. It is said that the best experiments are those which are made without any idea at all as to their results; with no preconceived notion — with no bias; that it is then only that an experiment is fairly made. Now I doubt if any philosopher, or any one pretending to be a philosopher, ever made an experiment without some intention—some object in his mind. But here you have the very curious phenomenon—experiment, if I may call it so—of cutting across the branches of the fifth pair in every different part of the face, without any expectation. Here is the very consummation of that unbiassed condition of the mind so much desired. What followed these frequent operations? In one patient the fifth nerve was cut, I dare say, a dozen

times, by the late Mr. Cruikshanks: "nine incisions, together with some smaller ones," (all on one side of the face,) is the expression in the account of the case—but without any observation at all—without any consequences, resulting from the series of experiments thus made upon man, being noticed: "the patient set out for Leicestershire, perfectly restored." Now this silence must have been because, in cutting across the fifth pair, surgeons found no distortion in the face; whereas, if the fifth pair had been the source of motion, the first patient that they cut would have been the last; the distortion would have been so unpleasant, so extraordinary, and so disgusting—you may see in the hospital what a horrid appearance it gives when the portio dura of the seventh is destroyed—that no body would have suffered to have the nerve cut. When I cut across the supra-orbital nerve, and saw no effect produced, I reflected—was it possible that I could have missed the notch in the frontal bone? I then thought of a near relation of mine who had an abscess here, on the temple, and who had a very animated countenance; but in whom, in consequence of suppuration taking place, all the animation was confined to one side of the forehead, while the eye-brow of the other side remained motionless. It was thus impossible to avoid the conclusion, that one nerve caused the motion of the features, and that it was another which gave rise to the sensibility of the surfaces of the face. Hence you see that the power of shutting the eye remained, in the case which we are speaking of, because the portio dura, proceeding by a circuitous route to the eye-lids, was free from the disease: this nerve coming through the temporal bone, and spreading its branches to the orbicularis oculi, bestowed the power of motion on that muscle; so that while the action of all the muscles of the eye-ball was gone, and that of the attollens palpebræ along with them, the eye-lid could be closed upon the eye; and to enable the patient to see objects, he was obliged to open the eye-lids with his fingers.

The temporary paralysis of the face, which you find stated in the case, is so far remarkable, that it proves that the inflammation of the tumor at one time increased, extended to the root of the portio dura, and subsided. It was from this occasional increase of the inflammation, indicated also by the adhesions, that the root of the seventh pair became involved, and paralysis of the muscles of the face was produced.

Now there is one point connected with the eye very much worthy of your attention in this case—the destruction of the outward organ, when paralysis of the face, and consequently of the orbicularis oculi, took place. Once more I must express my surprise that the well-educated members of our profession should have such a desire to countenance M. Magendie in his views regarding the influence of the fifth nerve upon the organs of sense. One would naturally imagine that it was the simplest thing possible to comprehend the peculiarity of the sensibility of the nerve of sense, the retina, as distinguished from the perfection of the organization which ministers to it, and is accessary to it. In this dissection, you see that the optic nerve escaped contamination, as it were; it was only forced aside—not involved in the actual disease; and therefore you learn with interest, that whilst the outward apparatus was becoming more and more injured, the sensibility of the surface lost, and the motion gone, the patient was sensible to light. But this sensibility of the retina could not, it is obvious, give vision, whilst the exterior apparatus was imperfect. Further, you perceive the necessity of the sensibility of the surfaces of the eye, and of the motions of the eye-lids and of the eye-ball, connected with that sensibility; that the transparency of the eye, and the exercise of the retina, may be preserved. When the fifth, and the third, and the sixth, and the seventh nerves, in succession, lost their powers, although the source of the tears remained, there was no governing sensibility, and no motion to wash the eye; motes fell upon its surface, irritated it, inflamed it, and then came opacity, and loss of vision.

There is another interesting circumstance in this case, which you will have patience to attend to. Before the portio dura became affected, and while the eye was transparent, if the candle was brought near the patient, he suffered unusual irritation in the eye; and sitting with his friends, he had to shade the eye from the light with his hand, although the eye-lids were closed. This is a thing which might escape your notice altogether. Why was it that he suffered irritation in an eye which seemed to be so securely guarded, that the eye-lid was never open? It was because the eye-ball never rolled upwards: the pupil was stationary; it was covered only by the thin membrane of the eye-lid, and that, as your own experience will prove to you, permits a red lurid light to pass through; and red light is, you know, the most irritating of all to the eye. The loss of power of the muscles not only embraced the voluntary motions, but the involuntary guarding motions of the eye; and the most important of these is the revolving of the pupil upwards during the perfect repose of the eye; by which means it escapes being

exposed to those rays that penetrate the eye-lid.

Aiming at him with the hand, he winked, because he saw the effort to strike him; and he winked through the action of the portio dura, the office of which was perfect; though at the same time you could draw your finger across his eye, and under the eye-lid, without his winking, or any motion being produced. This brings to my recollection the case so happily commented on by Dr. Watson. There also it was remarkable, that you might draw your finger across the eye, and the patient knew not that you did it, unless when it came opposite the pupil, and obstructed the vision.

You must have observed, in reading your collections of cases, that where there is one well described and authenticated case, you may find others following it. The things of which we are now speaking are of daily occurrence; and the only singular circumstance is, that hitherto they have not been noticed. I have now the pleasure of directing your attention to a case furnished by a gentleman who deserves well of his profession, a paper by Mr. Bishop, entitled, "Observations on the Physiology of the Nerves of Sensation, illustrated by a Case of Paralysis of the Fifth Pair," communicated to the Royal Society. I attended this lady, in whom I found all the symptoms that I have described to you; the excruciating pain in the upper jaw and face—a pain quite unlike tic douloureux—a continued gnawing pain—whilst there was complete insensibility to impression. Here, then, there was a disease of the trunk of the nerve, an exact counterpart to the case of Windsor, confirming it in all its details; and therefore I need not say another word upon it. As Windsor's case occurred in the hospital, it more properly belongs to you and to this occasion.

I have gone so fully and repeatedly into the comparison of the anatomy with the symptoms in these cases, that I shall not make any comment on the note of the case which follows, but recommend it to your attention.

"*Disease of the Fifth Pair, and of the Nerves within the Orbit; with Paralysis of the Arm and Leg of opposite sides.*

"James Godwyn, æt. 29, formerly a servant, gives the following history of his complaint. Eighteen months ago he was attacked with a severe pain, which extended over the left side of his face, temple, and crown of his head; and shortly afterwards he lost the sensation in these parts, and in the surface of the eye, and in the inside of his mouth and nostrils. He experienced, at the same time, a weakness in closing his jaws, when he attempted to chew upon the left side. The eye-lid of this side dropped, and he was unable to elevate it; and his eye was motionless; so that, to use his expression, it was *set* in the socket. His vision remained in both eyes; but he saw objects distorted and double. The left half of his tongue was insensible, so that the morsel frequently lodged between it and the gums without his consciousness; but still he could move his tongue about in every direction. He was not deaf in either of his ears; but he was distressed by a painful ringing in his ears, and he had frequent giddiness. Soon after the commencement of these symptoms his right arm became weak, and affected with numbness; and then his left leg was attacked in a similar manner.

"He is now much better, and only comes occasionally to the hospital to visit his physician, Dr. Watson. The pain in his face, or gums, where it was principally severe, is greatly diminished. Although the sensibility is not perfectly restored, it is very nearly of its natural condition. When he is made to clench his teeth, the muscles of the jaw on both sides appear to act with equal force. He can now elevate the left eye-lid, and roll the eye-ball; but there is a want of correspondence between the motions of the two eyes, which sometimes gives him the appearance of squinting. Occasionally the left eye-lid is only partially raised, while the right is elevated to its natural degree. Sometimes, again, when he winks or depresses the eyes, as in looking downwards, the right eye-lid alone drops, and the left remains open nearly to its full extent. The pupil of the left eye is more dilated than that of the right, and it does not contract by a strong light. He has still a debility in his right arm and left leg, which makes him halt and hang his arm like a paralytic."

And now I hope that I have gone far enough to point out to you the necessity of observing that there are different qualities, or endowments, in different nerves, and that when you take this principle along with you, and attend to the anatomy, you have only an agreeable exercise of your attention to reconcile the symptoms; which, without the just knowledge of the functions of the nerves and muscles on which they depend, are puzzling in the last degree.

New cases of diseases of the nerves have presented themselves, and we might proceed on this theme; but we must attend to the daily practice of the hospital, which I hope to do when I have next the pleasure of seeing you.

PARLIAMENTARY COMMITTEE.

It was moved on Tuesday last by Mr. Warburton, that a select committee be appointed, to inquire into the laws and regulations regarding the education and practice of the various branches of the medical profession in the united kingdom.

The following gentlemen have been appointed as the committee.

Mr. Warburton.	Mr. Hume.
Lord Howick.	Mr. Clay.
The Lord Advocate.	Mr. Robert Clive.
Mr. Littleton.	Mr. Ewart.
Sir Robert Inglis.	Mr. Peter.
Mr. Goulburn.	Mr. Strutt.
Mr. Shaw.	Mr. Edward Romily.
Mr. Abercrombie.	Mr. Walryche Whitmore.
Mr. James Oswald.	
Mr. Bannerman.	Mr. George Wood.
Mr. Andrew Johnston.	Mr. Ord.
Mr. Halford.	Mr. Gillon.
Mr. Frankland Lewis.	Mr. Sinclair.
Mr. Hawes.	Mr. Baldwin.
Mr. O'Connell.	Lord Oxmantown.
Mr. Spring Rice.	Mr. Serjt. Perrin.
Sir Robert Peel.	Mr. Jephson.

BIRTHS IN PARIS DURING THE YEARS 1831 & 1832.

In 1831 there were 29,530 births; in 1832 there were 26,823.

During fifteen years—*i. e.* from 1817 to 1831—there were born in France 7,490,951 boys, and 7,041,247 girls; the proportion of the former to the latter being nearly as seventeen to sixteen: that is to say, the number of males exceeded that of females by one-sixteenth. This, it will be observed, is at variance with the general opinion, which had fixed the proportion as being twenty-two to twenty-one. It is farther remarkable, however, that if we separate the natural children from those born in wedlock, the result brings us nearer to the old calculation: thus, in the fifteen years above alluded to, there were born in France, of illegimate children, males, 523,436—females, 501,115; being very nearly as twenty-three to twenty-two.

ANECDOTE OF ABERNETHY.

His wit, said Mr. Lawrence, was a weapon of which he had the complete mastery, even in moments of the most passionate excitement. I once saw him in altercation with a very distinguished man, when, after some very severe remark, the latter exclaimed—"You say so, do you? You will be made to eat your words." "Oh," said Mr. Abernethy, with one of his knowing looks, "there would be no use in that: they would be sure to come up again!"—*Hunterian Oration.*

ST. ANDREW'S DEGREES.

The College of Physicians of Edinburgh has transmitted to Lord Melbourne, for presentation to his Majesty, an Address, animadverting, in strong terms, on the late regulations of the University of St. Andrew's regarding degrees. "They lament," they say, "that this University, which ought to have been the last in ever hazarding a speculation regarding the studies and requirements of medical men, has very lately announced certain regulations for granting the highest honours in medicine and surgery, not only novel of character, but also, supposing them to be legal, of exceedingly dubious propriety."

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Feb.* 11, 1834.

Abscess	3	Inflammation	25
Age and Debility	37	Bowels & Stomach	1
Apoplexy	6	Brain	3
Asthma	17	Lungs and Pleura	7
Cancer	1	Insanity	1
Childbirth	2	Jaundice	2
Consumption	49	Liver, diseased	8
Convulsions	28	Measles	6
Croup	2	Mortification	3
Dentition or Teething	8	Paralysis	2
Dropsy	17	Small-Pox	1
Dropsy on the Brain	3	Sore Throat and Quinsey	1
Dropsy on the Chest	2	Spasms	1
Erysipelas	1	Thrush	2
Fever	4	Tumor	1
Fever, Scarlet	11	Unknown Causes	8
Fever, Typhus	1		
Heart, diseased	3	Stillborn	22
Hooping-Cough	2		

Decrease of Burials, as compared with the preceding week . . . 40

METEOROLOGICAL JOURNAL.

(Not come to hand.)

NOTICES.

Communications have been received from Mr. Clarke, Mr. Crookes, Dr. Rigby, Dr. Ley, Mr. Lyon, Mr. Toovey (Croydon), Mr. Roberts, Mr. Ames, Mr. Richardson, and Φ.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 22, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XX.

LABOUR.

Definition.—When the period of gestation is completed, the uterus, which before was inactive and inert, allowing itself to be evolved, and growing to a surprising size, begins a new action, which constitutes *labour*, or *parturition*. This term, simple as it is, designates a very complicated process, consisting of dilatation of the passages, and expulsion of the uterine contents; not of the fœtus only, but of the after-birth, or secundines, also.

Organs actively employed in the process.—The principal agent in labour is the uterus itself; but it is much assisted in its action by the contraction of the abdominal muscles, and probably also of the diaphragm. You must always recollect, however, that the uterus performs by far the chief office in the process, and that the other powers are merely assistants and accessories.

The child a passive body.—Under labour the fœtus is perfectly a passive body; so that a dead child is expelled, generally speaking, with pretty nearly the same degree of ease as a living one. I have before mentioned it was the opinion of the ancients, that the infant, by its own struggles, forced its way through the passages; or, at any rate, that it assisted very much in procuring its freedom. Ætius,—who lived at the end of the fifth century, and who was a compiler from the works of previous authors,—mentions especially the death of the fœtus as one cause of difficult parturition, since it could give no assistance in promoting labour. We may therefore suppose, that previously to his time this was the prevailing doctrine; and it continued so for long after.

Uterine action involuntary.—The action of the uterus is perfectly involuntary, and consists in a contraction of the fibres imbedded in its structure, and forming its peculiar parenchyma. These fibres, whether they are muscular or not, obey the laws of muscular action in labour. Their extremities are brought nearer together; their bulk, therefore, is somewhat increased, and their length diminished. Thus, inasmuch as the fibres run throughout the uterus, traversing it in all directions, every part of the uterine structure is lessened in extent, the capacity of the uterine cavity is decreased, and the internal membrane is brought into closer contact with the contents, or the external membrane of the fœtus. By this contraction, therefore, pressure is exerted, propulsion produced, and eventually expulsion is effected. Even after the child is born the same kind of contraction goes on in the uterine parietes, for the purpose of expelling the placenta and of closing the open vessels; so that hæmorrhage may be prevented or restrained. That the uterine contractions should be independent of the will of the mother is a very wise provision of nature; because it is most probable that many women would not have fortitude sufficient to bring on labour voluntarily at the end of the proper term of gestation; while some might induce action prematurely, either from fear, shame, or other motives.

Auxiliary muscles voluntary.—The auxiliary muscles, however, which assist the uterine powers, are to a certain extent voluntary: so that labour may be said to consist of a mixed action, principally involuntary, but partly voluntary; and it is in the woman's power to aid the contractions of the uterus by the exertion of her own will.

Why does labour come on at the period which nature has assigned for it?—There is a question of no great importance, but as it has occupied the attention both of physiologists and philosophers in general, it is worth while to say a few words upon it. Why does labour come on at a stated period? Some of these philosophers have attributed the accession of uterine throes to the fœtal, and others to the maternal system. Those who have referred it to the *fœtus* say, that at this time the new being requires more nourishment than it can get by absorption through the placenta; that it wants to breathe the fresh air; that it is desirous of seeing what we are all doing in this world of wonders, and therefore it begins to kick about, and irritates the uterus till it contracts. This, I need not tell you, is an untenable idea, because a dead child is expelled as well as a living one; so, if the commencement of uterine action were dependent on the activity of the fœtus, we ought to suppose that a dead child would remain for ever in the uterine cavity. Those who have referred it to the *mother*, tell us that it is owing to the uterus having acquired a degree of distention which it is impossible for it to exceed; that, therefore, having attained this immense size, and its parietes being incapable of stretching farther, contraction of its fibres necessarily ensues, as contractile efforts take place in a full bladder. Neither is this notion borne out by observation, because the uterus is not stretched, like a distended bladder; it is never, indeed, fully filled, but would always hold something more than it contains; so that its internal surface, although in close approximation to, never tightly embraces its contents until the commencement of labour;—it is developed by a process of living growth in its own structure, as we observe in other organs; but of a peculiar nature. Besides, the uterus frequently contracts prematurely, long before it has acquired that size which it had, on previous occasions, attained at the end of pregnancy. Another argument which we might bring forward is, that at one time the uterus, at the end of gestation, will be of larger bulk, and occupy a much greater space, than in any previous or subsequent pregnancy of the same female. A woman may have conceived of twins, or triplets; and in such a case the uterus at the end of gestation is considerably more evolved, and—from its containing within it a larger quantity of matter—weighs much more heavily than when it only contains a single child; and yet it will not contract until nine months are completed. We know also, that the large bulk which the uterus sometimes attains, depends not only upon the size of the child—not only upon a plural conception—but is sometimes consequent upon the formation of an increased quantity of liquor amnii; so that the same woman, in one particular pregnancy, may be as large at the end of six or seven months, as in her other pregnancies at the end of nine; and yet the uterus will continue increasing till the term is fulfilled. Thus we can neither refer the birth of the fœtus, at the end of nine months, to the feelings and inclinations of the child itself, nor to the distention of the uterus. Dr. Power, with some ingenuity, in a treatise published a few years ago, endeavoured to explain the action of the uterus on a peculiar irritability with which he supposes the os uteri endowed. He says, properly enough, that previously to the termination of nine months the cervix uteri is not fully expanded; that it only begins to be developed at the end of five months of utero-gestation; that from that period it commences being taken up to form a part of the general cavity of the organ; that the process of expansion goes on gradually to the close of pregnancy; and that then the head of the child comes to rest on the internal surface of the os uteri. He follows up his argument by supposing that so long as it presses on any portion of the cervix uteri unexpanded, so long there is no irritation; but that as soon as that part of the uterine structure is entirely developed, so that the head comes to rest on the upper portion of the os uteri itself, the uterus is stimulated to contraction. This is an ingenious fancy, but it is not borne out by facts; because the womb frequently takes upon itself expulsive action long before its neck is expanded, before any stimulation can be excited in the orifice itself, and consequently before the uterine fibres can sympathize with it. With all our science and modern discoveries, we cannot offer on this point any rational explanation; and we had much better content ourselves with the sentiment expressed by Avicenna, of old, when he tells us, that labour comes on at the appointed time by the command of God; which sentiment I consider one of the very few good remarks that ever escaped from Avicenna. I would never myself attempt to give an explanation to any person of the causes inducing labour, unless he would first explain satisfactorily to me, why human beings do not grow 20 feet high, or live for 500 years. If I ever obtain a satisfactory answer to these questions, I may then, perhaps, endeavour to reply to the one under consideration.

The general features of labour the same, but infinite diversity in the details.—The general features of labour are the same in all cases, but there is an infinite diversity in the details. Sometimes it is complicated

with irregularities and dangers; it is always attended with more or less of suffering; if the patient be conscious. The process varies very much in duration in different women, and in the same woman in different pregnancies. The pain suffered also differs much in different women, and in the same woman at different labours. Sometimes it is according to the strength of the uterine contractions; sometimes according to the resistance offered to the child in passing; but frequently it depends upon the degree of irritability, or sensibility, possessed by the uterus itself. There is no question but that the uterus of some women is much more sensitive than that of others; and we may believe that the uterus of the same woman is much more sensitive at one time than at another.

Uterus of inferior animals less sensitive than in the human species.—We have good reason to believe that the uterus of the inferior animals is not nearly so sensitive as the uterus of the human species; and that is one reason why we suppose the process of parturition in quadrupeds is not attended with so much painful sensation as the same series of operations in the human subject.

Symptoms.—The symptoms of labour may be classed under two heads—those which are indicative of the approaching crisis,—and those which indicate that the process has actually commenced.

Symptoms of approaching labour. — The symptoms indicative of approaching labour are the following:—first, a subsidence in the uterine tumor; secondly, an increased moisture and laxity of the vagina and external organs; thirdly, a peculiar degree of mental anxiety. I have already mentioned, that, at about eight months and a half of utero-gestation, the womb has acquired—perhaps not its largest size—but its greatest height in the person; that its fundus has then pretty nearly reached to the ensiform cartilage: but at the expiration of nine months it has generally sunk back to the situation which it occupied at the end of eight: so that its fundus may be felt half way between the ensiform cartilage and the umbilicus. This diminution in the volume of the uterus occurs sometimes suddenly, during the course of one night, so that the patient is surprised to find herself, on rising, so much less than she was the day preceding: but more frequently it is gradual, almost imperceptible from day to day, yet sufficiently obvious after the lapse of several. It is partly produced by the contraction of the uterine structure itself, and partly by the subsidence of the organ somewhat within the cavity of the pelvis. It is a very good symptom—because it shews us, both that the labour is disposed to come on in a natural way, and also—especially is this knowledge valuable in a first pregnancy—that the woman has a tolerably roomy pelvis, sufficiently large to admit the head to pass through the brim; for, if the head will enter the brim, covered by the cervix uteri, it will most probably descend through it when the os uteri is dilated. It is a remark constantly made by women when they are preparing for their confinement, that they are both smaller in size and feel lighter and more active in their persons than they had done before for some weeks. They then expect the speedy approach of active labour. It is, however, by no means an universal occurrence, and especially it is not observed in cases where there is a small pelvis; since the head is then kept above the brim, and the subsidence of the uterus consequently cannot take place.

The second indication of approaching labour is increased moisture, relaxation and distensibility of the vagina and the external organs. This is very apparent, not only in the human female, but in the brute creation. It is very usual, and it also is a good symptom; because it shews that there is a disposition in the passages to relax, as well as in the uterus to contract. It is dependent upon a natural law. We are told by some, that dilatation under labour is entirely a mechanical act—that as the uterus contracts it propels the head first through the os uteri, by dilating it mechanically, then through the vagina, and lastly through the external parts, by the same forcible distention. It is evident, from the structure of the organs, that a mechanical dilatation never could take place to such an extent, unless a corresponding disposition to relax were given them at the same time; and therefore we must consider the dilatation of the passages not entirely dependent on mechanical distention; but that it is partly to be referred to a law of nature which induces them to become relaxed and softened, when the uterus commences acting.

The third indication of approaching labour is drawn from the state of the mind.

We often observe, that, many days before any painful sensation is experienced, there is a degree of fidgetiness, or anxiety for the result of the labour. This is more strikingly marked in the brute creation than in the human subject. A woman has reason to sustain and guide her; she is strongly impressed with reliance upon a Supreme Power; she has the opportunity of calling to her aid the soothing comforts of religion;—but the brute does not possess any of these advantages. In our common domestic animals—the bitch, the cat, and others, whom we can watch narrowly previously to the commencement of par-

turition—we observe that a day or two before the process actually begins, they appear in great distress: their cries are evidently not those of pain, but (if we may allow it them) of anxiety; and they busy themselves in preparing a bed to which they may retire when *their time* comes. The same mental distress may be observed in the human female, modified and controlled by reason, fortitude, and religion.

Symptoms of labour having commenced, and corresponding treatment.—Those symptoms which are indicative of labour having actually commenced, are; first, painful sensations; secondly, a coloured discharge from the vagina; thirdly, rigors, or tremors without any sensation of cold; fourthly, nausea and vomiting; fifthly, irritability of the bladder; and, sixthly, of the rectum. We shall speak of these symptoms in the inverted order, because I shall have more to say upon those to which I first alluded.

The frequent inclination to pass the urine and fæces, consequent on irritability of the bladder and rectum, arises from the contiguity existing between these organs and the os uteri; and the sympathy through which they relatively affect each other: they are most usual symptoms of commencing labour, and depend on the process of dilatation going on in the os uteri. It is on account of this frequent inclination to pass urine or fæces, that I shall hereafter recommend you not to remain constantly in the room of a patient during the first stage of labour. A desire to evacuate the bladder will occur, perhaps, every ten or fifteen minutes, although there be scarcely any fluid in it. Medicines are of no avail under this species of strangury; but the feeling usually disappears as soon as the dilatation of the os uteri is pretty well completed; so that before the second stage commences, we have generally got rid of it. The same remarks may be made with regard to the tenesmus. This symptom is more distressing than the irritation at the neck of the bladder, and it may sometimes be relieved by an injection: a little warm gruel thrown into the rectum will frequently remove it. If the patient be suffering much annoyance from it, and the labour is going on but slowly, a few drops of laudanum may be added to it with advantage.

Nausea and vomiting very frequently,—indeed, almost always,—attend the dilatation of the os uteri, in consequence of the remote sympathy existing between the two organs. Sickness at the commencement of labour is generally hailed by the patient and her attendants as a good symptom. It is a common observation in a lying-in room, that "a *sick* labour is a *safe* labour." Such remarks as these I shall sometimes repeat to you, because most popular sayings are founded not merely on prejudices, but on observation and experience. Medical men have an opportunity of observing constantly that vomiting is connected with dilatation taking place in the mouth of the womb. We shall often find that the os uteri is rigid at the commencement of labour;—that it has little disposition to dilate, or become softened;—that this state will continue for hours;—and that labour has scarcely progressed at all, even although the pains may be tolerably strong. Under such a case, a sudden attack of vomiting occurs, not to be accounted for from any external cause; and on making an examination after it, the probability is, that we find the os uteri in a changed condition—that it has become relaxed, softened, and is dilated; so that we cannot but connect these two circumstances together, as cause and effect. Hence vomiting has been looked upon as a good symptom; and it has even been recommended, in cases of lingering labour, produced by rigidity of the os uteri, to give emetics for the purpose of inducing sickness of the stomach, under the impression that the act of vomiting itself was the *cause* of relaxation taking place in the os uteri. It is not the cause but the *effect* of that relaxation; so that the exhibition of emetics under labour, for the purpose of inducing artificial vomiting, does not produce that good which was anticipated from them; and they are now never had recourse to with this view. The matter which is ejected under this vomiting is merely what the patient has lately taken into the stomach, mixed with the secretions of that organ, and perhaps a small quantity of bile. The effort itself is not attended with much straining; it is only inconvenient, not painful. It seldom lasts any considerable time: there are a few attempts at vomiting, and then it ceases; but sometimes it will continue, distressing and annoying the patient for hours. In the latter case, it may perhaps be dependent on some deranged state of the stomach itself, or some other cause beyond the mere relaxation of the os uteri. Under such a state it may be necessary to give an effervescing draught, with five or six drops of tinc. opii; but generally speaking it is not to be interfered with. Sometimes, however, we find, after the stomach is emptied of its contents, the same anti-peristaltic action continues, and then there is pain attendant upon the effort. In such a case, a little warm diluent may be given, that the stomach may contain something on which to act. I have said that vomiting at the *commencement* of labour is to be looked upon as a good symptom rather than otherwise;—as indicative of the process of labour going on in a natural manner:

but we must discriminate this kind of vomiting from that which takes place under lingering labour, long after the first stage has terminated, produced by exhaustion of the system, and one of the very worst signs we can observe. There is no likelihood that we shall mistake the one kind of vomiting for the other;—this appears early in labour, the other after the patient has been in pain many hours;—accompanying the one there are no symptoms of exhaustion: the woman is in good spirits, the pulse is good, the countenance natural; in the other there are progressive symptoms of great distress, which I shall hereafter enumerate. The matter ejected from the stomach would also guide us, if we were in doubt:—in the first kind it is merely, as I have said, what the patient has taken as food, mixed with the natural secretions; when it is the effect of exhaustion, it is a deranged secretion, (which is sometimes formed in large quantities,) and in the worst cases it is fœtid, dark in colour, of a greenish cast, or like the matter vomited in the last stage of typhus fever, possessing somewhat the appearance of coffee grounds.

Another symptom frequently accompanying the commencement of labour is the occurrence of shiverings, or tremors unattended with any sensation of cold. This also is dependent on the opening of the os uteri. These rigors are seldom distressing; the patient pays but little regard to them;—she perhaps feels a little chilly, or shivers in a trifling degree, and she may experience many cold fits; but when the os uteri is opened they disappear. They are neither connected with any irregular arterial action, nor with pain in the head, nor any other bad symptom. Sometimes, indeed, they are sufficiently intense to shake the bed on which the patient lies, and cause the teeth to chatter, as if she were in the cold stage of an ague fit; and although she complains of feeling cold, the surface may be warm, and perhaps warmer than natural. It is scarcely necessary to use any other means than to add an extra covering to her person, and exhibit any warm diluent that she fancies. This simple shivering must be discriminated from that state in which the frame is violently agitated, and which is a species of convulsions, attended by symptoms hereafter to be specified, of the most dangerous character.

The next symptom claiming our attention is technically termed, in the language of the lying-in room, *the shew*. It consists of a discharge from the vagina, of a glairy character, tinged with blood. It is formed of an increased secretion from the vaginal surface, mixed with the gelatinous mucus which had previously blocked up the cervix uteri, and which is allowed to escape when the os uteri opens; and of blood poured out from those small vessels of the os and cervix uteri which previously ran into the deciduous membrane, and which are rendered patulous by the separation of the membrane on the dilatation of the mouth of the womb. This is, perhaps, of all that I have mentioned, the most positive symptom of labour having commenced. When this shew takes place at the full period, or near it, and especially if it be attended with periodical pains, we may be almost certain, even before we make an examination, that labour has actually begun. It is even a stronger symptom than pain itself alone, because the pains may not arise from uterine action, but may be situated in other organs. One of the first questions to be asked when you enter the lying-in room—and I would recommend that the inquiry be addressed to the nurse rather than the patient—is whether there be any "shew." Although it is not an elegant term, it is better to use this—which is well understood—than to adopt a more scientific mode of expressing oneself.

The last symptom is pain—pain in the uterus, produced by the contraction of the uterine fibres, and referred from the uterine region to the loins, to the upper part of the sacrum, and the inner side of the thighs. Labour-pain is merely the external evidence of uterine contraction; and the two phrases are synonymously used by all teachers and writers on midwifery: so that whenever I may happen to say that the pains were strong or feeble, frequent or otherwise, I beg you will understand that I intend to convey an idea of the state of uterine action. The sensation of pain is occasioned as well by the resistance offered to the parietes of the uterus, by the uterine contents during contraction, as by the pressure of some part of the ovum against the os uteri and vagina under the process of dilatation. These contractions are periodical; when the uterus is inactive, there is neither any pressure against the contents, nor any forcing through the os uteri; and the painful sensations are suspended. Generally speaking, the stronger the uterus acts the greater is the pain. In some women, painful sensations accompany the very first commencement of dilatation, before the os uteri has attained a size sufficient to admit the point of the finger; in others the os uteri has acquired a considerable diameter before any pain is experienced; so that the labour has made great progress unobserved and unnoticed. We often hear of women being delivered with three or four pains. We cannot suppose that the whole process of dilatation and expulsion has been effected by these few contractions: it is not reasonable to believe it; and we know to

the contrary by our examinations. But the case is explained by the process of dilatation having been accomplished without any sensation of pain, and by the expulsive efforts alone having been attended with suffering.

Uterine action, and therefore labour pains, may be suspended or removed by many causes: sedative medicines, taken into the mouth, injected into the rectum, or rubbed upon the surface of different parts of the body, will usually abate uterine contraction in a greater or less degree. Passions and emotions of the mind will also produce the same effect: thus fright, and sudden surprise,—even so trifling a circumstance as a stranger entering the room, when the patient expected her own attendant,—has been known to put a stop to labour, even in the midst of its most active operations, and to suspend it for many hours; as I myself have had opportunities of observing. For this reason we are very careful to prevent a woman in labour becoming suddenly acquainted with any news which are likely to shock her. The impression on the nervous system might produce such an effect as to arrest labour for some time, or perhaps even put a stop to the process entirely; so that we may be compelled eventually to have recourse to artificial means for accomplishing delivery.

Uterine pains are not constant, but intermit with intervals of ease: more scientifically, we might say that contractions alternate with relaxations. In the commencement there is merely a sensation of uneasiness; and when the active pains first begin, they are short, weak, infrequent, and occur at long intervals; by degrees they become more frequent, longer, and stronger; till, towards the end of labour, there is one continued effort at expulsion, lasting perhaps for many minutes uninterruptedly. The contractions of the uterus are attended with different sensations, as also a different kind of expression of pain at the different periods of labour; so that a man much accustomed to obstetrical practice can probably tell, on first entering the lying-in room, how far the labour has advanced, without making any inquiry verbally or any manual examination, but simply by noticing the expression of suffering which attends each uterine contraction. These pains, then, which are dependent and attendant upon dilatation of the os uteri, are described by the woman as being of a grinding or cutting character. They are attended by a moaning noise; if the patient be walking about the room she will rest on her attendant's arm, bend herself a little forward, stop for a minute or two, make a slight grumbling noise, and then resume her exercise: or if she be sitting in a chair, she will shrink into a smaller compass, as it were; press the elbows of the chair with some degree of force; and then gradually stretch herself out again. We know, then, (even if the patient makes no noise,) how often the contractions occur, by observing these indications of pain. Such are the "grinding" pains of labour: they are attended with a moaning, hollow, grumbling, seldom an acute tone. When dilatation, however, has gone on to such an extent as that the contents of the gravid uterus are propelled somewhat through the passages—pressing down into the vagina or upon the perineum—the pains are of a *forcing* character, and the expression attending them is very different from what I have just described. Under these forcing pains the breath is held in—there is, perhaps, no cry made at all—no sound uttered; the patient bears down and strains as though she were passing hardened fæces. If any audible expression of suffering escapes her, it is of an acute kind; and just when the child's head is resting on the perineum, distending the external parts, and is about to emerge, there is usually a loud *shriek*—a kind of wild cry. I have many times known that the child has been passing into the world before I entered the room, by hearing this peculiar shriek, which is usually uttered immediately on its expulsion.

SPURIOUS PAINS.

The presence of pain, however, is not always symptomatic of labour having commenced; for towards the end of gestation, women are subject to pains in the loins and bowels, simulating true labour pains in many points, but not connected in any way with uterine action: hence they are called *spurious*, or *false pains*. Sometimes they are confined in their situation, at others they are erratic; sometimes they return at tolerably certain intervals; more frequently they are very irregular in their recurrence. They are often connected with dyspeptic symptoms, and sometimes attended with involuntary spasms of the diaphragm and abdominal muscles, causing the woman to bear down, and believe herself in labour. Occasionally, also, a copious watery secretion from the glands of the os uteri occurs, so as to give an idea that the membranes of the ovum have broken; at other times an involuntary gush of urine takes place under the pains, which has frequently been mistaken also for the rupture of the membranes. If it be the urine that passes it may easily be distinguished by the odour. False pains generally come on at night. Sometimes they will annoy the patient for weeks before the termination of gestation;

at others they appear a few hours only before true labour. They are very distressing, and will frequently prevent the patient obtaining any refreshing sleep for weeks together.

Causes.—Both the seat and causes of false pains are very various. They may be situated in any of the pelvic or abdominal viscera;—in any of the muscles of the lower half of the trunk;—but are usually dependent on irregularity in the action of the intestines. Thus organic disease of the kidneys and bladder particularly, is likely to induce a kind of false pain. Prolapsus of the bladder before the cervix uteri, also is one, though an unusual cause of the same distress. It occurred to me, a very few days since, to see a case in which a prolapsed bladder had produced paroxysms of suffering very similar to the pains of labour. The patient believed herself to have been in labour for two days, and her medical attendant could not persuade her to the contrary. I found she was not advanced quite to her full time, but was lying on the bed in the usual position, as though she was in labour, apparently in much suffering, and using considerable voluntary efforts. I immediately detected the pelvic cavity filled with the partially distended bladder, and the os uteri perfectly undilated at the brim. The introduction of the catheter relieved the pain, and I have no expectation that labour will come on for many days.

A more frequent cause is spasm of the iliacus internus, psoæ, abdominal muscles, or those of the back, consequent on fatigue, too long a walk, or over exertion of any kind. But the most frequent of all is irritation in the bowels, or some irregularity in the action of the intestinal canal. Thus an attack of diarrhœa, flatulence consequent on dyspepsia, or more commonly still, costiveness, may all produce spasms of the muscular coat, that may be mistaken for parturient throes.

Diagnosis.—It is only in sensation that spurious pains bear any affinity to those of parturition; they differ in their seat, in the irregularity of their return and duration, and in their intensity not progressively increasing. Moreover, they are seldom attended by any of the other symptoms just enumerated. False pains, then, may be distinguished by their situation: instead of being in the back and loins, the painful sensation will perhaps be referred to high up between the shoulders, or to one side or the other: by their shifting their position;—they are not constant in their situation, but generally erratic. Particularly they may be known by the length of their duration, and their irregular returns. Thus true pains, at the commencement of labour, are short and weak, the intervals between them long; and they increase in frequency and intensity as labour advances: false pains, on the contrary, observe no regularity with regard to their return, or their becoming more frequent or severe. But the best criterion by which we can distinguish true from false pains, is an examination of the uterus externally, through the parietes of the abdomen; and internally *per vaginam.* If the pains be those of uterine contraction, when we place our hand upon the abdomen and make some slight pressure, we shall find that the uterine structure becomes harder, firmer, denser, and smaller, with each pain, until it arrives at its acme; we then observe it becoming softer and more flaccid, until it has acquired the same feel that it possessed when we first put our hand on the abdomen. Whenever, then, we feel the uterus becoming harder as the patient complains of the pain increasing, we may believe that pain is produced by contraction of the uterine structure itself. But it is not in every case when the abdomen becomes harder under pain, that uterine contraction is the cause; for it not unfrequently happens that spasm of the abdominal muscles produces the change; and under such irregularity in the action of their fibres there is communicated to the hand a deceptive feeling of progressively increasing hardness, as if it were the uterus contracting. When the muscles contract and embrace the uterus closely, it is almost impossible to discriminate between the feeling produced by the action of their fibres, and that caused by the contraction of the uterus itself; so that we are very liable to be mistaken. But on examining *per vaginam* there can be no mistake. When we make an internal examination, if we find the os uteri open, say to the diameter of a sixpence,—just sufficient to admit the finger freely; if we find that, with each pain, the disc of the os uteri becomes stretched like a cord around the membranes, which are protruded through it; if we find that the protruded membranes become tense with each pain, and flaccid when the pain goes off; and that then the os uteri also regains its original flaccidity, we are quite sure that this alteration is produced by a propulsion of the uterine contents; and that can only be effected by the contraction of the uterine structure; so that such pains are certainly those of labour. But if, on the contrary, we find the os uteri close—that there is no attempt at dilatation—no possibility of introducing the finger at all, and yet the patient is complaining of violent pain, and using bearing-down efforts, we are quite sure that the suffering she endures does not arise entirely—if at all—from uterine action. It is possible, however, that the os uteri may

be opened to a slight extent; and very likely we may be able to feel the head of the child presenting; and yet the pains may be spurious—active labour may not have come on. How can we discriminate this state? By feeling whether with each paroxysm the disc of the os uteri becomes tense, and during the acme of pain whether the membranes protrude. If there be no change in the os uteri, even although it will easily admit the point of a finger, and if there be no propulsion of the membranous bag when the pain is urgent, that pain is certainly not the result of uterine action.

I recommend you, whenever you have any doubt as to the nature of the pains, to make these examinations, first of the abdomen, and then of the os uteri. It is possible that by merely laying the hand on the uterus, you may be assured that it is not uterine pain; but if you are still not satisfied, it is right gently and delicately to insist on making an internal examination. The patient may object to this examination being made so early, but the information we gain by this simple proceeding is so useful, may save so much anxiety and distress, and so materially regulates our practice, that if deemed actually necessary the point should never be given up. Many a day and night has been spent in anxious watching over a patient, to the great annoyance of the practitioner, to the destruction of his rest and health, and perhaps to the loss of his professional character, when there was not the slightest necessity for such close attendance; simply because the patient would not acquiesce in the necessary examination.

Treatment.—Since spurious pains are so distressing, since they are producing no good, and since they may so undermine the patient's powers that she may not have strength enough left to go through the fatigue of labour, it is our duty, if possible, to remove them; and we shall find the best treatment to be rest in that posture most easy to the patient, acting pretty freely on the bowels, and the exhibition of opiates, either by the mouth or by injection. If there be a loaded state of the bowels, as is most usually the case, opium in the first instance will do more harm than good; but after the evacuation of the intestinal canal, that drug is highly useful. We may also have recourse to opiate liniments *ad libitum*, applied to the back, thighs, abdomen, or any other part which is the seat of pain. In plethoric habits, or if there be present symptoms of inflammatory action, it may be right to take blood from the arm; but, as a general principle, bleeding will not produce permanent relief. Spurious pains in first pregnancies are often produced by rigidity in the abdominal muscles, which do not distend as they ought, to allow the uterus to grow. The best means of relief will be found in gentle friction with some emollient application. We must beware, however, of letting this practice be carried beyond a certain limit; for we may perhaps excite uterine action. I knew an instance where a lady, married between 30 and 40, became pregnant, and the abdominal muscles were exceedingly rigid, so that she had scarcely any sleep after she was six months advanced in pregnancy. The pain was always relieved by her abdomen being rubbed, and her husband sat up half the night applying an emollient liniment. The consequence was he rubbed the child into the world; for she went into labour at six months and three weeks. I have no hesitation in saying that the premature birth was induced by the constant friction had recourse to for the purpose of relieving the pain.

AN EXPOSITION

OF THE

NATURAL SYSTEM OF THE NERVES,

According to the Discoveries of

SIR CHARLES BELL.

[IN order to lay before our readers a complete account of Sir C. Bell's views of the Nervous System, we have thought it desirable to follow up the observations made by himself, in the lectures in our two preceding numbers, by the following lucid extracts from his "Anatomy and Physiology of the Human Body."—ED. GAZ.]

THE nerves of the human body are, beside the nerves of vision, smell, and hearing, four systems combined into a whole. Nerves entirely different in function extend through the frame; those of sensation; those of voluntary motion; those of respiratory motion; and, lastly, nerves which, from their being deficient in the qualities that distinguish the three others, seem to unite the body into a whole, in the performance of the functions of nutrition, growth, and decay, and whatever is directly necessary to animal existence.

These nerves are sometimes separate; sometimes bound together; but they do not, in any case, interfere with or partake of each other's influence.

If we take up a nerve to examine it, we find that it consists of distinct filaments; but there is nothing in these filaments to distinguish them from each other, or to declare their offices. One filament may be for the purpose of sensation; another for

The figure represents a nerve, consisting of distinct filaments. A the nerve; B one of the threads dissected out.

muscular motion; a third for combining the muscles when in the act of respiration. But the subserviency of any of all these filaments to its proper office must be discovered by following it out, and observing its relations, and especially its origin in the brain and spinal marrow. In their substance there is nothing particular. They all seem equally to contain a soft pulpy matter enveloped in cellular membrane, and so surrounded with a tube of this membrane as to present a continuous track of pulpy nervous matter, from the nearest extremity in the brain to the extremity which ends in a muscle or in the skin.

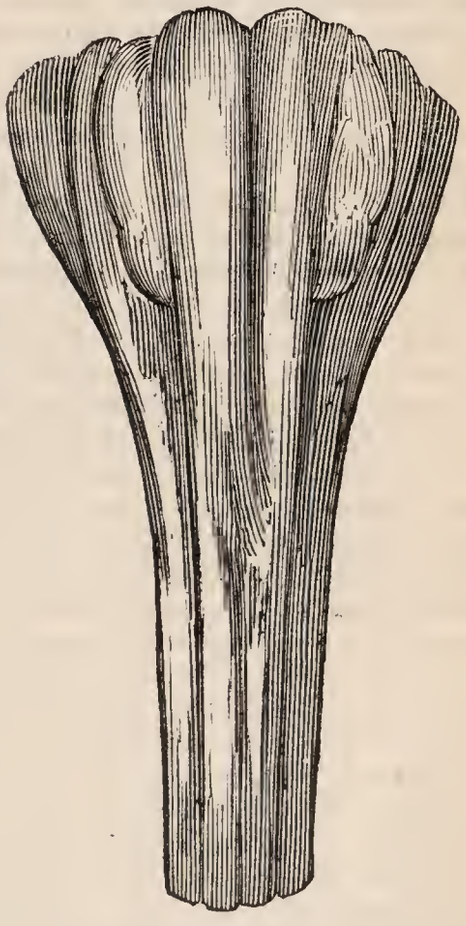
Previous to the observations which I have made, such a nerve as I have described was supposed to have all its threads alike; they were supposed to be branches from the same root, and all capable of exciting a muscle or conveying a sensation.

ON THE CAUSE OF THE COMPLEXITY OF NERVES.

It was the chief purpose of my papers in the Philosophical Transactions, to explain the cause of the seeming intricacy of the nerves of the face, neck, and thorax: but independently of the complexity arising from the causes afterwards to be explained, there are these:—It will be readily understood that some degree of irregularity in the distribution of the nerves, must arise from their being compound nerves; but the principal cause is the necessity of arranging and combining a great many muscles in their different offices. Wherever we trace nerves of motion, we find, that, before entering the muscles, they interchange branches, and form an intricate mass of nerves, or what is termed a *plexus*. This plexus is intricate in proportion to the number of the muscles to be supplied, and the variety of combinations into which the muscles enter, while the filaments of nerves which go to the skin regularly diverge to their destination. The nerves on the face, and those on the side of the neck, form plexus; but the grand plexus are near the origins of the nerves of the upper and lower extremity. And from the fin of a fish to the arm of a man the plexus increases in complexity in proportion to the variety or extent of motions to be performed in the extremity.

The explanation of a plexus which I have offered, is founded on these facts; viz. that by the interchange of filaments, the combination among the muscles is formed: not only are the classes of extensors and flexors constituted in the plexus, but all the varieties of combinations are there formed, and the curious relations established which exist between opposing muscles, or rather between the contraction of one class and the relaxation of the other.

THE SPINAL MARROW.



I have represented here, in a general way, the columnar appearance of the spinal marrow at its upper part; that superior extremity, which, being traced out of the base of the brain, is called *medulla oblongata*.

In this view of the nerves the internal and radical distinctions are more insisted upon, than that enumeration of their origin, and description of their devious course through the body, which have hitherto served only to confound the inquirer. We must, therefore, begin the description of the system with that of the spinal marrow. It is by a right arrangement of matters

which are familiar, and by attention to a few remarkable and prominent facts, that the ground-work of this system will be best understood.

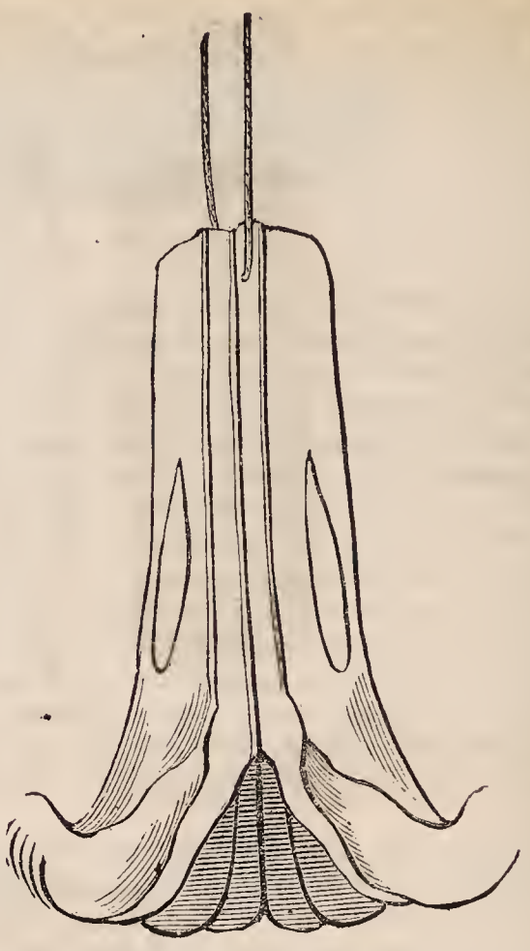
The spinal marrow is peculiar to the vertebral animals. It will suffice for superficial observers to say, that it must be so, because the spine is necessary to conceal and protect the marrow; but there is much more than this in the established relationship. The spine formed by vertebræ is necessary to such a constitution of the thorax as shall be capable of the motion of respiration; and the spinal marrow is equally necessary to that form and distribution of the nervous system which is required for associating and combining the muscles of respiration. Without the machinery of the spine and ribs, the thorax and abdomen could not rise and fall in respiration; and without the spinal marrow that arrangement of nerves would be wanting, which is necessary to regulate the motions of the trunk in respiration. Thus the spinal marrow, the spine and ribs, and the muscles of respiration, are essential to each other; as constituting the several parts of a grand design, subservient to respiration.

Different columns of nervous matter combine to form the spinal marrow. Each lateral portion of the spinal marrow consists of three tracks or columns: one for voluntary motion, one for sensation, and one for the act of respiration; so that the spinal marrow comprehends in all six rods, intimately bound together, but distinct in office; and the capital of this compound column is the *medulla oblongata.*

These six columns of the spinal marrow are discoverable on looking to the fore part of that body; but no doubt these grander columns contain within them subdivisions. Thus, if we lift up the medulla spinalis from the cerebellum, and look to it on the back part, we shall see more numerous cords, the offices of which will one day be discovered.

This view of the constitution of the spinal marrow led me to institute experiments, which were followed by the discovery of the distinct functions performed by the several roots of the spinal nerves; but without stating these experiments or their results, we shall proceed with the general view.

The anterior column of each lateral division of the spinal marrow is for motion; the posterior column is for sensation; and the middle one is for respiration. The two former extend up into the brain, and are dispersed or lost in it; for their functions stand related to the sensorium: but the latter stops short in the medulla oblongata, being in function independent of reason, and capable of its office independent of the brain, or when separated from it.



The medulla oblongata, raised by a thread, so as to expose the posterior surface.

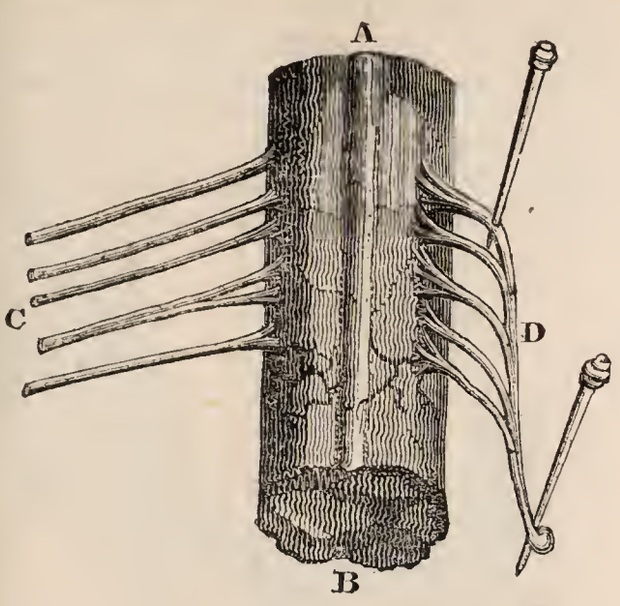
It is the introduction of the middle column of the three, viz. that for respiration, which constitutes the spinal marrow, as distinct from the long central nerve of the animals without vertebræ, and which is attended with the necessity for that form of the trunk which admits of the respiratory motions.

OF THE NERVES WHICH ARISE FROM THE SPINAL MARROW. — COMPARISON WITH THE NERVES OF THE ENCEPHALON.

The first conception which I entertained of the true arrangement of the nerves, arose from a comparison of the nerves which take their origin from the brain, with those which arise from the spinal marrow. The perfect regularity of the latter, contrasted with the very great irregularity of the former, naturally led to an inquiry into the cause of this difference. I said, if the endowment of a nerve depend on the relation of its roots to the columns of the spinal marrow and base of the brain, then must the observation of their roots indicate to us their true distinctions and their different uses.

The spinal nerves are perfectly regular in origin and distribution, and are thirty on each side. Each nerve has two dis-

tinct series of roots coming out in paekets or fasces, one from the posterior column, and one from the anterior column, of the spinal marrow.



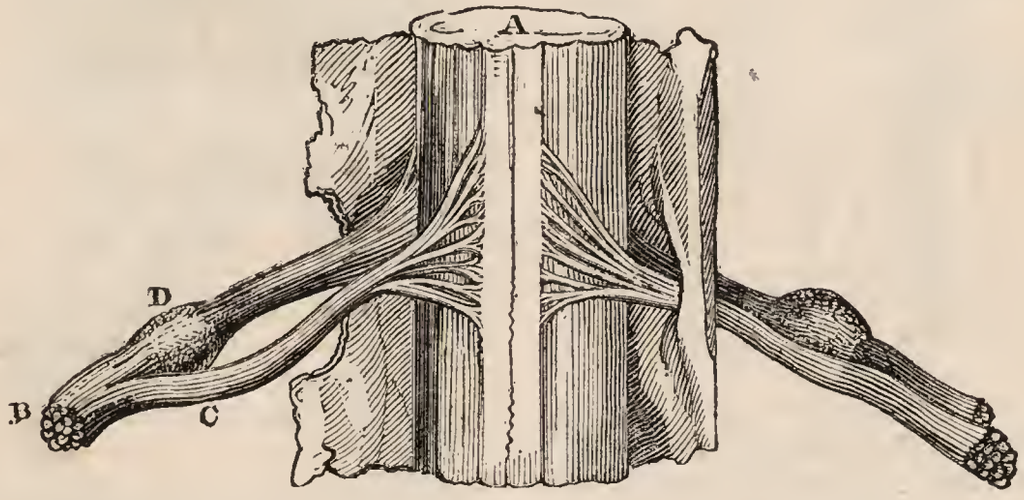
A B, the spinal marrow seen laterally; C, the posterior roots of a spinal nerve; D, the anterior roots of the same nerve pinned out.

The posterior fascis is formed of funieuli, which eome out with remarkable abruptness from the column; and their roots form a very regular row or series along the sides of the spinal marrow. They seem at onee to burst out from the confinement of the araehnoid eoat. These funieuli, eonverging towards the foramen of the sheath of the spinal marrow, and being eollected together, form a ganglion.

This ganglion is not seen within the sheath of the spinal marrow; its seat is in the part where the faseis is surrounded and united to the sheath, and just before this root of the nerve joins the anterior one, to constitute a spinal nerve.

The funieuli of the anterior roots of these nerves gather their minute origins with more irregularity than the posterior; and from a wider surfaee.

The thirty nerves thus formed of two distinet faseieuli, are suited to perform all the offices of the trunk and limbs. Is it, then, by that combination of properties which they acquire through their double



A, the spinal marrow seen in front; B, a spinal nerve; C, the anterior root of the spinal nerve; D, the ganglion on the posterior root.

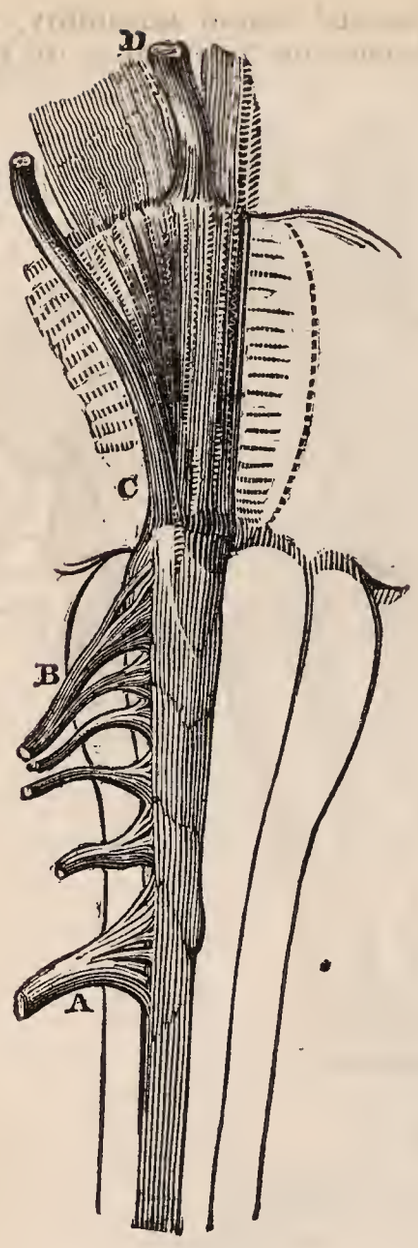
roots, that they are capable of performing their offices? And is this the cause of their simplicity of arrangement in their eourse through the body, as contrasted with the nerves of the head? Again, what cerebral nerves, in their distribution to the head and faee, eorrespond in office with the spinal nerves? On the solution of these questions will depend our knowledge of the whole nervous system.

The anterior roots of the spinal nerves, and the anterior column of the spinal marrow, being thus shewn to have a power over the muscular system, the next step of the inquiry was distinetly indicated. If I pursue the traek of the anterior column of the spinal marrow up into the brain, shall I find the nerves which arise from it to be museular nerves? An anatomist will at onee answer, that only muscular nerves arise in this line.

We see here the anterior root of the spinal nerve, arising from the eolumn at A. We traee the column up into the eorpus pyramidale, and find there the origin of the ninth nerve B. We see that this nerve has only one series of roots, corresponding with the anterior roots of the spinal nerves, and that these roots eome from the *tractus motorius*, and we cannot forget that this nerve is entirely devoted to the muscles of the tongue; that it is the motor of the tongue.

Following up the corpus pyramidale, we find issuing from it the sixth nerve, a museular nerve of the eye. Still following up the *tractus motorius* through the *pons Varolii*, we come to the roots of the third nerve, the motor nerve of the eye. Thus all the nerves arising in one line from the crus eerebri to the eauda equina are muscular nerves; and no nerves of a different kind arise in all this line.

On finding this confirmation of the opi-

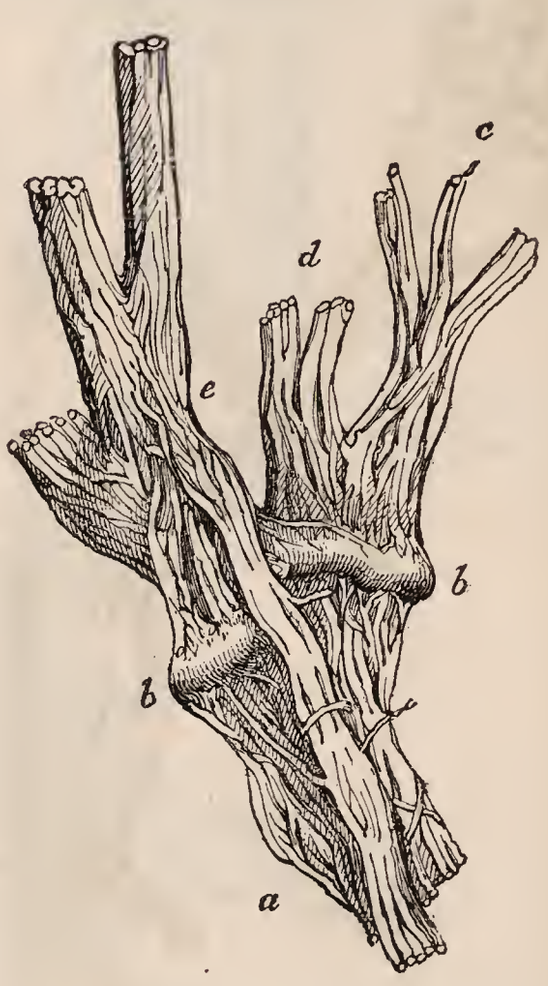


nion, that the anterior column of the spinal marrow, and the anterior roots of the spinal nerves, were for motion, the conclusion presented itself that the posterior column and posterior roots were for sensibility. But here a difficulty arose. An opinion has prevailed that ganglia were intended to cut off sensation; while every one of the nerves, which I supposed were the instruments of sensation, had ganglia on their roots.

Some very decided experiment was necessary to overturn this dogma. I selected two nerves of the encephalon; the fifth, which had a ganglion, and the seventh, which had no ganglion. On cutting across the nerve of the fifth pair on the face of an ass, it was found that the sensibility of the parts to which it was distributed was entirely destroyed. On cutting across the nerve of the seventh pair on the side of the face of an ass, the sensibility was not in the slightest degree diminished.

By pursuing the inquiry, it was found that a ganglionic nerve is the sole organ of sensation in the head and face: and thus my opinion was confirmed, that the ganglionic roots of the spinal nerves were the fasces or funiculi for sensation.

It now became obvious why the third, sixth, and ninth nerves of the encephalon, were single nerves in their roots, as contrasted with the spinal nerves; for if the fifth nerve bestowed sensibility universally on the head and face and all the parts contained, there was no necessity, so to speak, for the third, sixth, and ninth, having the posterior or ganglionic root.

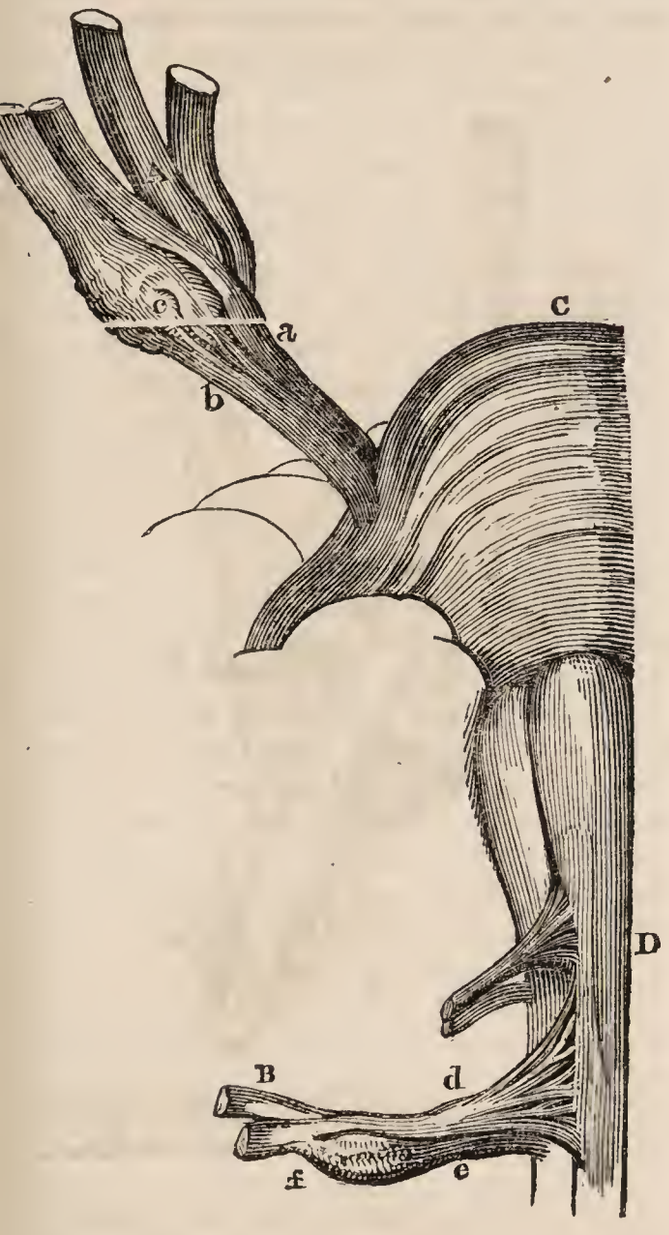


a, the two roots; *b*, the Gasserian ganglion; *c*, the ophthalmic division; *d*, the superior maxillary division; *e*, the inferior maxillary division.

Pursuing the subject, and still directed by the anatomy, the next matter of inquiry was to ascertain how far the fifth nerve of the encephalon corresponded with the spinal nerves. It was discovered that the fifth nerve bestowed sensibility on all the cavities and surfaces of the head and face. It was also observed, that where the sensibility of the integuments remained after the division of the fifth nerve, it was only to the extent of surface supplied by the nerves of the spine. Where certain fibrils of the spinal nerve extend upon the integuments of the side of the jaw, these are equivalent in office to those of the fifth nerve. In short, in regard to their property of bestowing sensibility, the fifth and the spinal nerves were identified.

But was the fifth nerve in other essential circumstances similar to the spinal nerves? On recurring to the anatomy, and comparing the fifth nerve of the ence-

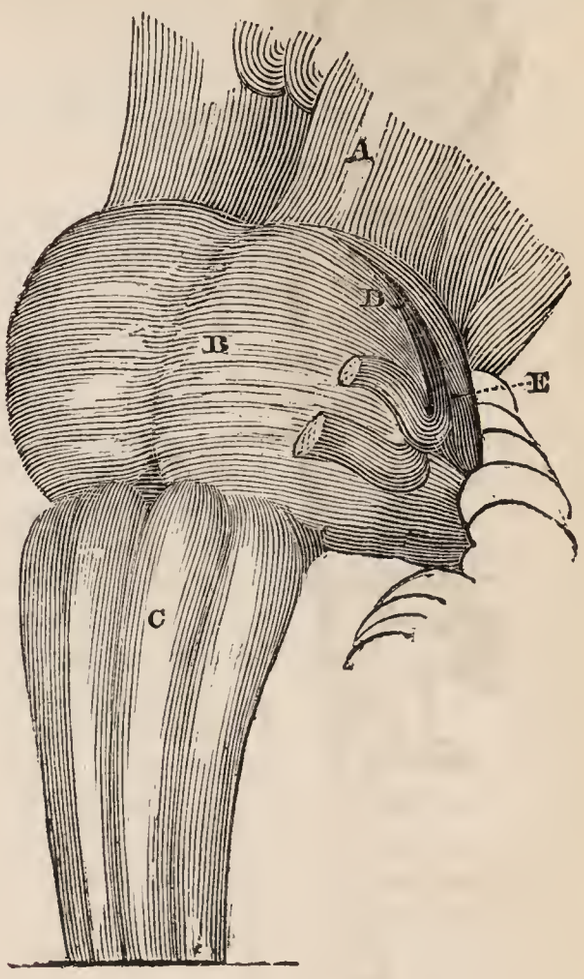
phalon with a spinal nerve, the resemblance, both in man and brutes, was very remarkable. In this plan we recognize corresponding parts. In both nerves we see the double roots; the anterior root passing the ganglion, and the posterior root falling into it or forming it. On following back the anterior root, we may perceive that it comes out betwixt the *funes* of the pons Varolii, and, in fact, from the crus of the cerebrum.



We have here a plan of the fifth nerve, and one of the spinal nerves.

A, the fifth nerve; B, a spinal nerve; C, the pons Varolii; D, the corpus pyramidale; *a*, that origin of the fifth which has no ganglion; *b*, the root of the fifth which has a ganglion; *c*, the ganglion; *d*, the anterior origin of the spinal nerve having no ganglion; *e*, the posterior ganglionic root of the same nerve; *f*, the ganglion.

Observing that there was a portion of the fifth nerve which did not enter the ganglion of that nerve, and being assured of this fact by the concurring testimony of anatomists, I conceived that the fifth nerve was in fact the uppermost nerve of the spine; that is to say, the uppermost or most anterior of those nerves which order the motion, and bestow sensibility, in its extended sense, on the frame of the body.



A, crus cerebri; B, pons Varolii; C medulla oblongata; D, two ropes or funes of the pons, which part to give origin to the anterior root of the fifth nerve; E, a fasciculus from the crus cerebri, giving origin to the anterior root of the fifth nerve.

To confirm this opinion by experiment, the nerve of the fifth pair was exposed at its root, in an ass, the moment the animal was killed; and on irritating the nerve, the muscles of the jaw acted, and the jaw was closed with a snap. On dividing the root of the nerve in a living animal, the jaw fell relaxed. Thus its functions were no longer matter of doubt: it was at once a muscular nerve and a nerve of sensibility. And thus the opinion was confirmed, that the fifth nerve was to the head what the spinal nerves were to the other parts of the body.

One circumstance I may notice in passing: the origin of the fifth nerve being above or anterior to the termination of the column of the spinal marrow for respiration, it can receive no roots from it. How, then, are the features to be moved in sympathy with the lungs, and with the respiratory actions of the breast, neck, and throat? We find that this is effected through the portio dura of the seventh.

I have now only to add, that these opinions and experiments have been followed up to the satisfaction of all Europe.

OBSERVATIONS ON

THE NEURALGIC AFFECTIONS OF STUMPS AFTER AMPUTATION.

By John Farrar Crookes,
House-Surgeon to St. Bartholomew's Hospital.

The pathological appearances which have been observed on the dissection of stumps, previously subject to that painful affection which sometimes occurs after amputation, have been clearly described by Mr. Langstaff, in a paper published in the sixteenth volume of the Medico-Chirurgical Transactions; and he seems to deduce from them the superiority of the flap operation over the circular mode of amputation, recommending at the same time the additional precaution of drawing out the nerves from the surface of the stump, and snipping off a portion with a pair of scissors, as tending to prevent the occurrence of this painful malady. Of its treatment, when it does occur, he says little, adverting only to a case in which, all remedial means having failed, it became necessary at last to have recourse to the removal of the end of the stump. Hence we must necessarily infer, that he considers any means short of such a mode of treatment as of no avail—a conclusion, I think, we may readily come to, if we consider the diseased state of the extremities of the nerves, as he describes them, to be the exciting cause of the affection. But another equally important practical point at the same time presents itself for our consideration—have we sufficient evidence to regard secondary amputation as a certain means of cure when resorted to; or does it offer such chance of success as to warrant us in urging its adoption? The remarks I am about to make on the following case will in some measure bear upon this query; yet, as the experience of many can alone decide it satisfactorily, I trust the additional fact therein contained may in some measure recompense for occupying so large a portion of your valuable journal.

Case.—*Severe suffering consequent on an Amputation of the Thigh—Local and constitutional symptoms.*

Sarah Slyfield, about eighteen years of age, was admitted into St. Bartholomew's in July last. She had undergone amputation of the right thigh in the country about nine months before her admission, for disease in the knee-joint, the effect of an injury received several years previously. When received into the hospital, she stated that the pain in the stump had come on within a few days of the removal of the limb; and that, although the part had been carefully examined, and means adopted for her relief, it had continued to increase, almost without intermission, up to the present time. Shortly after the wound had healed, six months after the operation, a small lump formed in the extremity of the stump, which was opened, and several pieces of dead bone extracted, but without affording any relief. Menstruation had commenced about the age of sixteen, and continued regularly up to the period of the operation, but has since only occurred once. Her person was stout, with a hale and somewhat bloated countenance, and she complained of nothing but severe and incessant pain in the stump. Examination of the part much increased her distress, as the slightest touch in any point of its integument gave her pain. The limb was naturally large from fat, but without any swelling or redness; and the extremity of the bone seemed well covered by soft parts. She was bled to sixteen ounces, and ordered purgative and saline diaphoretic medicines, and to apply linseed meal poultices.

This painful affection, which was so severe as almost entirely to prevent the patient getting rest, continued gradually to increase for about four months, in spite of the adoption of the most active remedies. Local and general bleeding, counter-irritation by moxa, narcotics, and the application of sedative plaisters to the stump, with tonics and antispasmodics, were all tried in vain; and the patient began to entreat to have the stump removed, to procure her, if possible, some alleviation of her sufferings. During this time she also experienced repeated attacks of hysteria; and was once seized with pain and acute sensibility of the integuments of the abdomen, which at first excited a suspicion of peritonitis.

As it was suggested by some that there might be suppuration in the extremity of the stump, a puncture was made into it, and the knife carried to a considerable depth, but without evacuating any matter, or producing any beneficial effect; it was therefore resolved

to perform a second amputation of the limb.

Operation.—On account of the shortness of the stump it was impracticable to employ the tourniquet, and compression was made on the artery, as it passes beneath Poupart's ligament, by an instrument ordinarily used for that purpose. The muscles on the outer part of the thigh were first divided, and those on the inner, including the artery, last, in order that the vessel might be secured as soon as cut through. The bone being sawn through, and several small vessels tied, the ischiatic nerve was drawn out, and about an inch of it removed; some of the branches of the crural nerve were also cut shorter. Fifty minims of laudanum were given after she was taken to bed, as she was suffering great pain.

Examination of the Stump.—The extremity of the ischiatic nerve was bulbous, and of an almost cartilaginous hardness, and from this bulb there was continued in various directions a layer of dense cellular tissue, connecting it with the bone, the muscles, and the cicatrix. One of the filaments of the anterior crural nerve, perhaps the nervus saphenus, had also a bulbous termination, comparatively much larger than the ischiatic, and was similarly connected with the surrounding parts. The extremity of the bone appeared free from disease, nor was there any suppuration in its neighbourhood.

From the time of the operation up to the period of her discharge from the hospital, with the exception of a slight recurrence of the painful sensibility of the integuments of the abdomen, she continued to go on well, never having experienced any pain in the stump, or any unfavourable symptom. The remaining portion of the limb was very short, but sufficient to permit of the adaptation of the ordinary wooden leg, with the additional security of a strap to pass over the shoulder.

The question which we have before suggested, namely, whether or not the severe symptoms, which the patients experience in these affections, are wholly dependent on the state of the nerves, as evinced on the examination of stumps after their removal, or after death, may, perhaps, be in some measure elucidated by an inquiry into—how such a state might have been produced, and in what manner it had acted in exciting so painful an affection. Mr. Langstaff remarks, that he has carefully examined these bulbous extremities of the nerves, and that he considers their enlargement to be dependent upon a deposition into their cellular structure, the effect of irritation, excited in the end of the nerve by its being left in the surface of the wound, and not on any disease or increased deposit of nervous matter. This appears very probable, as, in addition to the irritation attending the cure of the wound, many circumstances might tend to produce a chronic degree of inflammation and consequent deposition of lymph in the extremity of the nerve so situated; such as the presence of spiculæ of bone or of ligatures in its immediate neighbourhood, careless sponging, poultices, or stimulating applications. But how should this be productive of the excessive sensitiveness over the whole extent of the integument of the stump met with in these cases? The increased sensibility of the extremity of the nerve does not account for it; for, were it dependent on this alone, the pain would be constant, I should think, in one or more points of the stump, or be excited only by pressure, applied in some particular direction. The following view appears to me to offer a rational solution of the question. After a certain length of time, the irritation in the extremity of the nerve, which is first the cause of the production, and may afterwards be kept up by the existence, of the bulb, being continued along the nervous cord to the spinal marrow, and extending to the roots of the branches given off in the neighbourhood of the one which has conveyed it, may be again transmitted to their extremities, rendering sensitive every portion of integument to which its filaments are distributed. The irritation, then, thus excited, either in the spinal marrow or its coverings, may easily proceed to a greater or less extent up the cord, causing the same affection in other parts. This, I am inclined to believe, was the case in the present instance, when the integument of the abdomen and chest, as high up as the mammary glands, became so tender, that the slightest touch or pressure of the bed-clothes gave her excruciating pain: and, again, might we not attribute to a further extension, in a milder degree of the same cause, those severe attacks of hysteria which she from time

to time suffered, and which did not reappear after the second operation?

The condition of the nerves in the stump being permanent, the irritation transmitted to the spinal marrow continues, and after a certain lapse of time becomes itself a source of continual excitement, which may again extend or be transmitted to more distant parts of the cord, or to the brain, giving rise to tic douloureux of the face, or neuralgic pains in any part of the body—affections which have not unfrequently been observed, I believe, to come on in similar cases to those above alluded to. If this be a correct view, it is evident that when the affection has proceeded thus far, amputation of the extremity of the stump can offer but slight chance of success, as in all probability the disease set up in the spine will continue to produce the distressing pains in other parts, and most likely the same painful affection of the stump. But, on the contrary, should the operation be resorted to in an early period of the complaint, we have strong reasons for believing that it would be attended by results equally satisfactory to those in the cases above mentioned.

These remarks, I confess, may appear somewhat hypothetical, but still they seem to me so strictly in accordance with reason and analogy, that I look forward to further experience in the hope of being able to corroborate them. In a practical point of view, they are of considerable importance; for, should they be found true, they would strongly urge us to resort, as soon as possible, to amputation; whilst, even now, I think we are possessed of a sufficient number of facts to warrant us in holding it forth as a measure to be strongly recommended.

The various and powerful means adopted both in Mr. Langstaff's case, and in the one above reported, which was under the care of Mr. Lawrence, and the nature and extent of the altered state of the extremities of the nerves, pretty clearly shew how useless it is to expect much benefit from therapeutical means; and the difficulty of ascertaining exactly what filaments, or how many, are diseased, together with a consideration of the pain which would attend the search after them, would almost preclude the adoption of any operative proceedings short of amputation, unless the symptoms should positively indicate the situation of the disease to be confined to one nerve, when it might be advisable to give the patient the chance of a successful removal of it by extirpation.

Of the superiority of the flap over the circular operation, I shall say nothing; it appears to me to be rather a matter of taste than of importance: the recommendation to cut off a small portion of the nerves at the time of the amputation is, however, I think, essential. It removes the divided extremity of the nerve from the sphere of irritation, and permits it to heal in the ordinary way, without any impediment.

SUBMAXILLARY TUMOR SUCCESSFULLY REMOVED.

To the Editor of the Medical Gazette.

Sir,

In confirmation of the views which I laid down with respect to compresses, in a communication which was inserted in the Gazette of the 12th of October last, I forward you the following case, and am, sir,

Your obliged servant,
Isaac Lyon, M.R.C.S.L.

Hull, Jan. 28, 1834.

M. T., æt. 13, a healthy-looking girl from the country, presented herself to me on the 11th October, to consult me respecting a tumor which she had upon her neck. She stated that she had had it five years, and that she had tried many means which had been recommended to her by others, but without effect. It began by a small swelling on the left side of the lower jaw, in the situation of the submaxillary gland; it now extends from the symphysis of the chin to the angle of the jaw, measuring in this direction $3\frac{1}{2}$ inches; from the chin to the most dependent point, $2\frac{3}{4}$ inches; and at what may be called the base, 3 inches. It is of a very irregular figure, appearing as if a portion had been scooped out from the fore part; has a number of small nodules upon its anterior surface, and presents a most unsightly appearance at the side of the neck. It is so hard as not to admit of any impression being made upon it by pressure. It is very moveable, and the skin covering it very thin, but not at all discoloured. She has never suffered any pain from it, and bears its being handled without complaining. Behind the left sterno-mastoid are two glands enlarged, one about

the size of a filbert, the other very small; and behind the right are three small ones. The family, which consists of many children, is very subject to enlargement of the lymphatic glands. As the tumor was very moveable, the girl's health good, and I thought these glands enlarged probably from scrofula, I recommended an operation, to which she readily consented. On the two following days I gave her active aperients, and performed the operation on the 14th, assisted by Mr. Sherwin of this town, Mr. Marsh, of Pocklington, and some young men.

I began the operation by making two incisions, commencing at the base of the jaw, and terminating at the lowest part of the tumor, so as to include within them an elliptical portion of skin, the short diameter of which was one inch, and the long three inches. This I left attached to the tumor. I then dissected it from its connexions, leaving the platysma myoides attached to the skin. Not more than two or three tea-spoonfuls of blood were lost during the operation. The following parts were seen after the removal of the tumor: the internal jugular vein, the common carotid, and the left corner of the os hyoides. Three small arteries required ligatures. Five sutures, and strips of adhesive plaister, were used; and over the whole were laid compresses, secured by means of adhesive plaister, so as to keep the skin directly in contact with the opposed surface, and prevent the formation of a sinus. I then gave her one grain of opium. The girl bore the operation with extraordinary fortitude. I ordered her to live upon spoon diet, and to be kept confined to her bed, with the head constantly lying upon a pillow.

On examining the tumor, I found it enclosed in a ligamentous membrane, thin at the fore part, but very thick and firm at the back part. On making an incision into it for the depth of three-quarters of an inch, it cut like cartilage, of which it had the appearance; but below this was a substance very much resembling curd, but rather harder. In one part was a small cavity about the size of a filbert, which contained a few drops of a fluid resembling olive oil in colour, and having an unctuous feel. Nothing like vessels was visible in the interior; but in one part it was traversed by a band of cellular membrane. The weight of the tumor was 6½ oz.

On the 17th I removed the sutures, and found that the upper part of the incision had healed by the first intention. All was going on well until the 21st, when, contrary to my most express orders, she was allowed to get up, which caused a little oozing of venous blood. This continued for five days, but gradually diminishing. In this case, as in the last, there appeared a disposition to form a sinus; but by means of compresses this has been prevented. One ligature came away on the 22d, and the other two on the 24th. On the latter day the edges of the skin were about one-twelfth of an inch distant from each other. The granulations required touching occasionally with arg. nitr.; and on the 1st of November the wound was perfectly healed.

I did not allow her to rise out of bed until within two days from the healing of the wound, as I dreaded very much the formation of a sinus, which had given me so much trouble in the last case. Had it not been for the compresses, I think there is reason to suppose that a sinus would have been formed. The largest of the two glands behind the sterno-mastoid has disappeared. The wound in this case healed in eighteen days; in the other, six weeks elapsed before the cure was completed.

SYMPATHY OF THE UTERUS AND MAMMÆ.

To the Editor of the Medical Gazette.

Sir,

There is, perhaps, nothing more interesting, or more worthy the attention of an accoucheur, than the various sympathies which shew themselves between the uterus and other parts of the system. The morning sickness of early pregnancy; the convulsions in the latter months, or during labour; the violent rigors when the os uteri becomes fully dilated, or immediately after the birth of the child; the contraction of the uterus when the face is sprinkled with cold water, or after a draught of any cold fluid; are some of the most remarkable, among a considerable number, which occur before and during labour.

The connexion, in the unimpregnated state, between the uterus and stomach, is well displayed by the gastric derangement which frequently accompanies pro-

lapsus uteri, and *vice versâ*. The pain and swelling of the mammary gland from menstrual irritation, or where there is subacute or chronic inflammation, or organic disease of the uterus, in like manner demonstrate the link between this organ and the breast. But the most striking instance of sympathy which I have remarked between these two organs, is the sudden and powerful contraction which is excited in the uterus, when in a state of inertia, by applying the child to the breast.

My attention was first drawn to this subject by an observation which I met with some years ago in Carus's *Gynäkologie*, recommending the application of the child to the breast to promote expulsion of the placenta where it was slow in coming away; but I was far from being aware of the extent to which this sympathy really existed. In cases where there has been considerable disposition to hæmorrhage after labour, from non-contracted uterus, and where I have been afraid to leave the patient, lest flooding should come on in my absence, I have been for the last two years in the habit of ordering the child to be put to the breast as soon as her clothes, &c. were changed, and herself comfortably settled in bed, feeling that I thus diminished the chances there might be of any hæmorrhage occurring. It was not, however, till last year that I began to see the practical importance of this sympathetic connexion between the breast and uterus in its full extent. Having had two or three cases of severe hæmorrhage after labour, from uterine inertia, which had to a degree resisted all the common modes of treatment, and where permanent contraction could not be induced even by repeated injections of cold water and vinegar into the vagina, I determined to see what effect the application of the child to the breast would have upon the relaxed uterus, and was agreeably surprised to find the observation of Professor Carus confirmed in its fullest extent, firm and permanent contraction having been immediately produced in every case.

In looking over my notes of labour cases, I find that I have only mentioned its being done in four instances, where the hæmorrhage was extremely profuse, and resisted all the other means which had been previously used; although I recollect having applied the child to the breast in several other cases of slight hæmorrhage, which were not of sufficient interest to deserve noting down. Of these I select two, which not only serve to shew the severity of the hæmorrhage, but also point out another fact which is worth noticing.

Uterine Hæmorrhage checked by applying the child to the breast.

23d June, 1833.—M. R. æt. 30, delivered of a boy: sixth child. Presentation natural: labour quick. Has been always subject to hæmorrhage after labour, from inertia uteri. Was called to deliver the placenta. The uterus was hard, but there had been profuse flooding. The placenta required a gradual but firm extracting force to bring it away: some large coagula followed. The uterus became somewhat larger, but was still hard. On pressing the fundus another large coagulum escaped. She was very faint, and vomited some pulv. sec. cornuti which I had given her. The uterus after this remained hard and small, but the most imperceptible increase of its size was followed by a discharge of blood. Water by itself, and then vinegar and water, were repeatedly thrown up the vagina; and, as the faintness increased, brandy and ammonia were given, as occasion required. After a while, when scarcely any discharge appeared, even upon coughing or straining to vomit, a bandage, with a large compress upon the fundus, was applied round the abdomen. As, however, the discharge returned, I ordered the child to be applied to the breast, the stimulus of which immediately produced full contraction of the uterus. On changing her clothes and putting her to bed, she wandered considerably, and there was strabismus. A drachm of tinct. hyosciami, in mist. camphoræ, brought on refreshing sleep; and she awoke some hours after, much better, but very weak. She suffered for some days from severe headache, and nearly total loss of vision, but eventually recovered.

Another Case, with an additional peculiarity.

Oct. 21, 1833.—M. L. æt. 34, delivered of a boy: third child. Presentation and labour natural. Of very unhealthy appearance. Acne of the nose and lips. Profuse hæmorrhage after labour, to which she has been also subject in her

previous lyings-in. Ergot of rye, cold externally applied, and cold injections into the vagina, had no permanent effect. Another woman's child was put to her breast, but still the uterus refused to contract, but when her own was dressed and applied, permanent contraction instantly followed.

This is the only case where I have not found immediate and permanent contraction of the uterus follow the application of the child; but I must also observe, that it is the only case where the patient's own child was not applied. I well remember that she allowed it to be placed by her side, without making the slightest attempt to assist in directing its mouth to the nipple, and scarcely even noticed it; but the instant her own was brought, her eye brightened up, the mother's feelings were excited, and she instantly roused herself to receive it in her arms and caress it. The powers of instinct produced an involuntary stimulus to the nervous system, and called into existence that beautiful chain of sympathetic actions which is evidently intended by nature as a protection against many of those accidental causes of danger to life during the important process of parturition.

When I first began to use this plan of treatment in cases of inertia uteri after delivery, I was frequently startled by finding a sudden gush of blood, accompanied by a forcible discharge of coagula, follow almost instantly the application of the child; but soon satisfied myself, that so far from being a return of the flooding, it was merely the result of the uterus contracting firmly and expelling its contents.

It is a common saying among nurses, that "the child brings after-pains;" that is, when the child is first applied to the breast on the second or third day, as was formerly the custom, it was frequently followed by pretty smart after-pains, which evidently resulted from the uterus being excited to contract and expel any coagula of blood which might be lodging in its cavity or sinuses. Hence, besides its beneficial effects in preventing any danger from hæmorrhage, the early application of the child to the breast is a valuable means of preventing much of that uterine pain and irritation which is apt to result from the presence of coagula, &c. in the womb, after labour.

Since writing the above, my attention has been drawn to some interesting observations in the Dublin Journal, No. 11, by Dr. Patterson, on the Effects of Mammary Irritation in the Cure of Amenorrhœa, &c. A patient, in whom the catamenia had been wholly suppressed for two years and a half, and who had been successfully treated for an attack of fever, had been ordered a sinapism to the right side of the chest, on account of pains of an hysterical character which had presented themselves. The sinapism had been inadvertently made so large as to cover a considerable portion of the breast; much irritation, with hardness, pain, and swelling of the gland, was produced, which in the course of about 36 hours was followed by a copious discharge of the catamenia. Reasoning from the sympathetic action which exists between the breast and uterus, Dr. Patterson tried this plan of mammary irritation in another case of amenorrhœa, and with a similar result: the catamenia appeared in 24 hours from the application of the sinapism, with complete restoration of the health. These facts are not only interesting, but valuable in a practical point of view; they also confirm, in a striking manner, the observations which I have submitted to you, and prove that we possess, by means of stimulus applied to the breast, a powerful, and I might almost say certain, means of acting upon the uterus, where other methods have been unsuccessful.—I am, sir,

Your obedient servant,
EDWARD RIGBY.

44, Parliament-Street,
Feb. 10, 1834.

OBSERVATIONS ON THE

CROWING INSPIRATION OF CHILDREN,

And its Connexion with a Morbid Condition of the Thoracic or Cervical Absorbent Glands.

BY HUGH LEY, M.D.

Physician-Accoucheur to the Middlesex and to the General Lying-in Hospitals, and to the Parochial Infirmary of St. George's, Hanover-Square.

[Continued from page 749.]

I MAY now, I trust, without arrogance, assume that enough has been said to establish the proposition, that the crowing inspiration of children may be in-

duced by the enlargement of glands, situated in the course of, and influencing the function of the recurrent nerve, and occasionally of the par vagum. Some may be disposed to refer the disturbed state of the respiratory function in these cases to mechanical obstruction of the air-tube from compression, and diminution of its area. But without entering minutely into this question, I may content myself with alleging, that these are not the symptoms of such mechanical obstruction;—that infinitely larger tumors, directly upon the trachea, have been found to produce no such effects;—that that canal will bear a degree of pressure, which will produce ulceration of the mucous membrane and ecchymosis, without the production of these symptoms (Lawrence);—and, lastly, that the seat of disordered function is not the seat of disease. It can only be, therefore, by nervous communication, that the constriction, upon which this symptom depends, can be produced.

What, however, it may be asked, is the nature of this influence upon nerves in the vicinity of the thoracic and cervical glands, when in a state of induration and enlargement? Before we shall be in a condition to reply satisfactorily to this question, it is requisite that I should advert very briefly to a subject at present confessedly in its mere infancy—namely, the general pathology of nerves. Of these the diseases may sometimes be merely functional—at least they are often found to err, either by excess or imperfection, where no structural disease or extraneous impulse can be detected. Into this branch of this intricate subject, however, it is unnecessary for me to enter: it is too comprehensive for me upon this occasion to prosecute its inquiry, and it is only very remotely connected with my present inquiry; and even with respect to the effects of disease and external impressions, it behoves me to be brief.

There are, however, a few general principles connected with this latter subject, which, meeting me at the threshold of this investigation, cannot be evaded, and which, leaving the proofs and illustrations for another occasion, I must here content myself with announcing. They are these: 1st, That if injury or disease exist in the trunk of a given nerve, the effects are to be traced at the remote extremity of its filaments. 2dly, That all the branches proceeding from such common trunk will have a similar disturbance of their function. 3dly, That if the nerve be itself diseased—if its neuralema be inflamed or thickened—if a foreign body be lodged amongst its filaments—if a tumor be formed within its substance—there will be an "exaltation of function," an excess, commonly painful, of sensibility, if it be a nerve of sensation; of action, if a nerve of motion; of both, producing agonizing pain and muscular spasms, if a regular or compound nerve; and, lastly, if the mechanical impression resolve itself into the principle of simple pressure, there will be a diminution of nervous energy, varying in its degree, according to the extent of compression, from mere defective sensibility and muscular activity, up to the complete extinction of nervous influence in the state of complete paralysis.

These principles, almost elementary, are the general deductions from a minute examination of the detached cases of "affections" of nerves to be found in the records of medicine; and abundant evidence of their truth might be gathered even from a single collection—the record of the transactions of a society which contains amongst its followers many of the most enlightened members of our profession—the Medico-Chirurgical. Taking it for granted, therefore, for the present, that the accuracy of these general principles will be conceded to me, I shall proceed at once to apply them to the effect produced by enlarged absorbent glands upon the two nerves within their reach—the par vagum and the recurrent.

First, then, the injurious effects are to be traced, at their ultimate distribution, beyond the seat of injury.

If the par vagum be affected, the principal consequence will be experienced in the respiratory organs; for it contributes largely to the formation of the pulmonic plexus in the circulating system, because it is connected with the cardiac and aortic plexus, but less severely upon the heart, because this organ, for important purposes, is extensively supplied with nervous influence from other sources; and in the stomach, where it forms the stomachic plexus.

But its branches will also be subjected to a similar disturbance of their function; the recurrent, therefore, must greatly suffer. So Le Gallois found that the effects upon the glottis were identical, whether he divided the par vagum below

the origin of the superior laryngeal, or the recurrents themselves. The branches of the recurrent pass—as all conversant with the anatomy of this nerve well know—to the fibrous connexion of the extremities of the cartilages of the trachea, to the lining membrane of that important canal, and ultimately to the opening muscles of the glottis; and its principal associations and connexions are with the nerves of the lungs, heart, and aorta, that the muscles which it supplies may open the chink for the purposes of respiration, when by the influence of the superior laryngeal (which has its principal communications for associated action with the nerves of deglutition, and which supplies the closing muscles) that chink has been already closed, during the act of swallowing. From injury of any kind, therefore, of the recurrent, there will be evidence of disturbed function in those fibrous bands at the back of the trachea, in its lining membrane, and in the movements of the glottis.

But, lastly, there is no evidence in this disease that the nerves have undergone any of those morbid changes which I have already enumerated; and we may infer, therefore, in conformity with the general principle which I have announced, that the injury inflicted upon the nerves by these glandular swellings will impair their function, and that they will consequently err by defect, not by excess.

Now the office of the fibrous bands,—the muscularity of which has been clearly ascertained,—is directly, according to Portal, to shorten, as well as diminish, the area of the trachea—(according to Sir Charles Bell, merely to effect the latter object): for the purpose, according to the former, of influencing the power of the voice; according to the latter, who thus corroborates a pathological observation of Dr. Baillie, also of carrying the sputa against their gravity towards the larynx; for expulsion, by cough, when in excess; but in ordinary cases, by the mere expiratory efforts.

If these bands lose their power, the effects, in conformity with these views, will be twofold. The area of the tube will exceed its average dimensions, and mucus will be accumulated within it. To prove that this is the case in the disease which I have been noticing, I need only refer to the cases which I have put upon record;—the mucous rattle, of a deeper tone than usual, in the first example, is decisive.

The recurrent, also, by its distribution upon the lining membrane, endows it with such sensibility as it possesses. This sensibility is probably at the same time impeded, and must greatly diminish the embarrassment which the accumulation before alluded to would otherwise occasion. So in the same instance, it will be recollected, that although the wheezing "could be heard from one end of a large room to another," yet the child suffered little or nothing. In the midst of that which alarmed the friends, and created anxiety in the mind of the medical attendant, the child was happy and cheerful, and even endearing, from its extreme playfulness.

When the pressure of the glands does not greatly interfere with the movements of the glottis, as often happens in the earlier stages of the disease,—or where the filaments thus passing to the back of the trachea are affected, to the exclusion of the trunk,—this mucus is dislodged sometimes by vomiting, but more frequently by a paroxysm of cough, violent and suffocating, like hooping-cough; and, for reasons hereafter to be explained, these paroxysms occur particularly in the night. But in the more severe forms, and more advanced stage of the disease, when the glands are larger, and there is consequently greater pressure, the opening muscles of the glottis, upon which the observations of Le Gallois, Magendie, and others, have shewn this nerve to be distributed, will be also affected. And since, from this comparison, the muscular bands at the back of the larynx have lost much of their power of action, and the sensibility is diminished, it must be concluded that the influence upon the remote extremity of the nerve must be similar in kind to that upon its branches, and consequently produce defective action of those muscles. But the function of the superior laryngeal nerve is preserved in all its integrity; the sensibility of the glottis, therefore, is unimpaired, and the closing muscles act with very imperfect opposition, from the alternate influence of their antagonists. If this exists in one, and a minor degree only, there may be merely the crowing inspiration from the diminished area of the rima glottidis; but much more frequently, by observation, when present during an attack, or by minute inquiry of the attendants, we

shall learn that there has been, previously to the crowing, a complete, though temporary, suspension of the breath; the language of the nurse being constantly, "I thought it would be suffocated" or "strangled"—"I had great difficulty in bringing it to"—"I thought at one time it was really gone"—"It looked exactly like a corpse"—"I was obliged to shake it, and pat its back, for minutes before it would come to." In these cases, the obstruction of the chink is complete for a time, during which all access of air to the lungs is prevented: there is asphyxia from what Dr. Copland calls "impossible action of the respiratory muscles." This is attended with vehement, and, as in hanging, sometimes, perhaps, really convulsive struggles, and generally ends in producing such a degree of opening as will allow a narrow stream of air to rush through the contracted aperture. Sonorous inspiration is the consequence; and under these circumstances the crowing is nature's cure—it is the remedy, not the disease. When this occurs, the patient is generally safe from this attack.

It may appear, perhaps, a startling proposition, to allege, that this malady is more allied to paralysis than to spasm; and yet the observations I have made would seem to prove that it is true; and upon this point one consideration appears to be conclusive. These glands cannot act upon a nerve above and beyond their reach; the superior laryngeal is therefore unaffected, and retains its powers and properties: the pressure is upon the recurrent, and compression, according to the principles I have announced, where the nerve is not diseased, produces defective action. Were it otherwise in this case,—did the cause resolve itself into one of excitement, producing excess of action or sensibility,—the mucus would not have been retained; the irritation from its accumulation, if such accumulation could occur at all, would have been excessive, and the rima glottidis would have been forced open, but could not by possibility have been closed; for the muscles which this nerve supplies separate the arytænoid cartilages from each other; and by their contraction, spasmodic or otherwise, the chink would be enlarged. Yet the conviction that this disease is of the essence of muscular spasm, has been almost universal: it has influenced the nomenclature, as is proved by the designation given to this disease by Clarke, Underwood, Capuron, North, Joy, and others. The authority of the late Dr. Clarke—himself a host—is quoted in its support. Cheyne also has given it countenance. It may seem, therefore, to some, almost heretical to deny it. I hope, however, it may not be imputed to me, that I participate too much in the spirit of the times, if, thus breaking through the trammels of authority, I venture, in the language of the eloquent Dr. Gregory—"magna nomina non nimis venerari et opinionum auctoritatem veræ scientiæ semper inimicam spernere."

The foundation upon which the general impression of the convulsive character of this ailment rests, has no where, as far as I know, been explicitly stated. I suspect it is often a mere inference from the suddenness of the attack; but compression produces the same effect as division of a nerve, and from the latter, as in the series of beautifully-conducted experiments by Le Gallois, the effect was equally instantaneous. Others appear to have supposed the disease to consist essentially in muscular spasm, because attended frequently with other partial or general convulsive actions: this being meant to include the carpo-pedal contractions, and the violent contraction of those muscles by which the movements of the spinal column are effected. But these pedo-carpal contractions are rather accidental combinations than universal attendants; and, according to Cheyne at least, occur principally during the paroxysm. Dr. Clarke, however, Mr. North, and others, allege that such contractions continue in the intervals also; and I have had many opportunities of realizing the accuracy of their statement. But that which lasts for days, or weeks, and even continues during sleep in the night, cannot surely be a spasm or convulsion; its continuity excludes the idea. I consider these contractions, therefore, rather in the light of a continuous direction given to the thumb, fingers, more rarely the wrists, the toes, the plantar arch, and the ankles, by the greater mass of flexors overpowering insensibly the lesser mass of extensors. To this the feebleness of these children contributes, just as it is not unfrequently observed in bed-ridden persons, and in the decrepitude of age,—but in a less degree,—because in adults, the movements, at least of the different parts of the feet

upon eaeh other, are cramped, and mueh more imperfeet than in the ehild; for the obvious reason, that children have not been subjeeted to the restraint of shoes. In one ease—the only one I have seen which coincided exactly with the description given by Dr. Kelly in the Edinburgh Medical and Physieal Journal, and whieh was obviously conneeted with ehronic hydroecphalus—the skin in the palm of the hand had aeeommodated itself to this continuous bending of the thumb, the eondition of whieh was preeisely that which would have been produced by the eieatrix of a burn, where the fleshy part of the thumb bends inwards upon the palm of the hand. In idiots, too, it is very frequently observed, and is in them more allied to enfeebled action of the extensors than spasmodic contraetion of the flexors. When this bending of the thumbs, &c. continues in the intervals, during the attaek the eontraetion is rigid, and is nearly allied in character to the aetion of other muscles which I am immediately to notiee. It is expressive of distress and agony, and is more partieularly apt to oecur in asphyxia, or great embarrassment of the respiratory funetion, than in true convulsions. Henee, in the engravings illustrative of the position of individuals who have died of strangulation, this condition of the thumbs and fingers has been generally represented; and it is no wonder, therefore, that, even where not observed, or not existing during the intervals, it often oeeurs during the paroxysm. It is searcely neeessary for me to add, that where the attacks have been frequent, and these eontraetions eonsequently reiterated, a sort of habit may be engendered, which may contribute to produee a more permanent disposition of these parts to assume a flexed condition. That these eontraetions are not spasmodie, is further proved by the facility with whieh a very moderate forec draws the parts affected from their situation, and by the gradual manner in which they return to it.

But the muscles of the spine, too, it has been said, are affected with eonvulsive movements, bending the body backwards in different degrees; sometimes to such an extent as to approaeh to opisthotonos. This extent, however, as far as I have been able to observe, never oeeurs but during the attack, and it consists rather of rigid eontraetion than *spasm, either tonic or clonic;* the aetion is generally rather violent than anormal. These are just the vehement struggles of threatened suffocation, and may be sometimes—as they are observed to be in hanging—aetually convulsive. They are not, however, eonfined to these muscles; they extend to all the museles which are supplied with "respiratory nerves." So the eye stares, and starts forward from its soeket, and is rolled in agony; the faee is sometimes distorted; the muscles of the neek are rigid, like eords; and the museles of the back are also rigidly eontraeted. But they are all either the vehement struggles attending a laboured inspiratory effort, or the outward expressions of agony. These are the oecurrenees to whieh some writers upon this disease have given the name of "*general*," as eontra-distinguished from the earpopedal eontractions, which have been designated "*partial convulsions.*"

It is, however, not to be denied, that upon some oeeasions, though mueh less frequently than has been eommonly imagined, the reiterated interruptions, amounting to temporary suspension of the respiratory function, may interfere with the venous eirculation from the head. We eonstantly find the external jugular enormously turgid, knotted, and often serpentine, during the paroxysm; and this may occasion congestion in the head, with its more remote or indirect eonsequenees—increased arterial aetivity, possibly with effusion; and then result "general elonic eonvulsions," just as is every now and then observed with respeet to hooping-cough, one of the fatal terminations of which is hydrocephalus. But, as in the latter instance, the essential disease is pertussis: though the effusion upon or within the brain may be the cause of the death, so in the former case the temporary asphyxia from glandular enlargement constitutes the essential feature of the disease; the head-affeetion, though destruetive, being a secondary effect.

Nor is the occasional suddenness of death in these eases any proof of the spasmodic character of the ailment: such an argument will not bear the test of the slightest inquiry. Nothing can be more instantaneous than death from division of the upper part of the spinal marrow; and yet the effect is the most remote from convulsive. The cause of

death is in this experiment similar to that which sometimes destroys the patient suddenly in the disease in question —asphyxia from a suspension of the respiratory function.

Even if it were proved definitively, that the closing of the glottis upon these occasions is convulsive, it would by no means justify the conclusion, so frequently deduced from it, that the original cause must be seated in the cranium. That vascular excitement within the cranium may sometimes operate as a cause of this crowing, is unquestionable; and this is probably the case where true convulsions are observed. Under these circumstances, the head affection may be the direct cause of the convulsions, the danger, and the death; but as far as my experience goes, it has been almost universally only the indirect cause of the sonorous inspiration. I have rarely seen the crowing attend unequivocal cases of cerebral excitement, unless this has been accompanied with a morbid condition of the cervical glands; for "these glands not only enlarge from particular affections of the teeth and jaws, and of the integuments on the outside of the head, but from affections of the brain and its coverings *." Even where there is no direct evidence of the cervical glands being thus enlarged, it is yet probable, in cases of crowing connected with cerebral excitement, that the bronchial glands may be the cause of this symptom. It is an observation of Dr. Cheyne, corroborated by most writers, that hydrocephalus is constantly occurring in scrofulous subjects. I am indebted to Mr. Swan for the important fact, that in opening the bodies of children who have died of hydrocephalus, he has *not unfrequently* found these glands enlarged; and Dr. Marsh has asserted, that he has never seen this spasm but in scrofulous children. (In verb. Spasm of the Glottis, in the Cyclopædia of Practical Medicine.) The conclusion, therefore, which I feel authorized to draw upon this part of the subject is, that whilst the head affection may occasion true, and even fatal convulsions, the cause alike of the breathlessness, or "*fits of strangling or suffocation*," the crowing, and commonly the death, when very sudden, will be found in the constriction of the glottis, occasioned by compression of the recurrent nerve.

In the course of this inquiry, circumstances have presented themselves to my mind, which, if not anticipated, and reconciled to the view which I have taken of this disease, might be advanced as objections. If enlarged glands are thus capable of producing such serious effects upon the parts supplied by the recurrent nerve, why should we not meet with the same affection in adults? In reply to this, it may be safely alleged—1st, That adults, comparatively free as they are from the causes which produce such enlargement in children—as teething, excoriations or cruptive ailments upon the face and scalp, and perhaps hydrocephalic excitement—are much less liable to the formation of such tumors. 2dly, That when the trachea has acquired its adult size, it gives more protection to the recurrent, which lies imbedded in a spongy cellular texture "in the depression between the trachea and the œsophagus;" and it must be obvious, that the greater the circumference of the trachea, the deeper and larger must be the hollow beneath the most bulging part of its sides, and its point of attachment to the œsophagus. And, 3dly, the larynx is larger; and this, it is acknowledged, influences the results of experiments and the effects of disease, for "the larynx and glottis of the adult are much larger than those of the infant;" and "it is at the same time to the excessive narrowness of the glottis at the earliest periods of life, that the extreme danger of sore throats (*'les angines'*) and croup are owing."—(M. Bourdon.)

But although the "crowing" is not a common occurrence in the adult, yet asphyxia from closing of the glottis, it is well known, may occur from violent pressure, especially if sudden, upon these nerves; so there is strong reason to believe, that asphyxia has been produced by the inadvertent application of a ligature upon the recurrent, in an operation for subclavian aneurism. M. Bourdon states, that when the recurrent is "*tiraillé et distendu par l'aneurism*" of the arch of the aorta, the voice is at first altered, and sometimes, also, "*suffocation occurs from it, although the aneurism shall not have burst.*" Sudden death has also occurred from pressure upon the other recurrent nerve by an aneurism of the arteria innominata, from a

* Cruikshank, p. 131.

scirrhous enlargement of the thoracic absorbent glands, and probably, though not certainly, from great swelling in a case of cynanche parotidea.

But *this disease is paroxysmal, whilst the alleged cause is permanent.* This has always struck me as one of the strongest arguments for the spasmodic character of the disease, since it is one of the great characteristics of that excited state of a nerve which manifests itself in painful affections, resembling—perhaps constituting—tic douloureux, if it be a nerve of sensation; in muscular spasm, if it be a motor nerve; and in the combination of agonizing pains, with convulsive movements, if it be a regular or compound nerve. These all occur in paroxysms; and perhaps the explanation offered by Mr. Swan constitutes as near an approximation to the truth as any that can be offered. "It may be," he says, "that a nerve cannot at first bear a diseased action without rest, any more than it can a healthy one; and therefore the diseased action, after a certain period, ceases to make any impression; but after this rest the nerve acquires fresh powers, and is again fitted for the same action." In palsy, on the other hand, it is said, with equal truth, that the pressure being permanent, the loss of sense or of motion, or of both, is also permanent. This is true, as far as the nerves of sensation and volition are concerned. In these, even the manifestations of palsy are constantly observable; but in paralytic ailments of the muscles supplied by respiratory nerves, the palsy, though continuous, is not constantly manifest. In the paralysis of the muscles of the face, for instance, from pressure upon the portio dura, the defective power is not observed till, in speaking or emotion, or difficulty of breathing, vigorous action of these muscles is required; then, one set of muscles acting, to the exclusion of the other, the face is distorted. It is probable that something similar takes place in the glottis. Although physiologists speak vaguely of the alternate opening and shutting of this chink in ordinary respiration, it must be obvious that in neither of the alternate actions of respiration can it be completely closed. In inspiration, air must pass into; in expiration, out of the chest; in both, therefore, the glottis must be pervious. As to the slight period which intervenes between the two, the labours of physiologists have taught us nothing; and perhaps it is scarcely worth while to pursue the inquiry. We know, however, that its natural state, when uninfluenced by muscular agency, is that of openness or permeability to the ingress and egress of air. It is so in the still-born fœtus; it is so when all nervous energy is abolished, as in the experiment of Magendie, by the division of the four laryngeal nerves. As in the tranquil slumbers of a child, or in an adult who is in perfect health, no expansion of the nostrils, no raising of the shoulders, is observed, so, in the glottis, either muscular agency is very little or not at all extended during ordinary and easy respiration; but when the breathing is embarrassed from any cause, as in the experiment of Le Gallois,—who separated the larynx from its attachment to the os hyoides, that he might see the movements of the glottis; or the ineffectual attempt of the suicide, in which they were exposed to the observation of Sir Charles Bell and others,—then an obvious, perhaps considerable, opening and shutting of the glottis may be observable. And, as paralysis of the muscles supplied by the respiratory nerves of the face, neck, and back, only manifests itself when the muscles of one side, which are in a healthy condition, act unopposed by their antagonists, so in the glottis the effects of the enfeebled, if not paralyzed, state of its opening muscles are only observable in those more vigorous efforts which are made when the respiration is hurried or impeded; as in fright, fits of anger, sudden awaking from sleep in consequence of some external impression—in screaming—in crying—in coughing—or even when the descent of the diaphragm is prevented by distention of the alimentary canal, whether from accumulated undigested or feculent matter, or simply from flatulency, the result of the fermentation of undigested food; and these are notoriously amongst the most common causes, according to the best authorities, of a paroxysm.

Another cause why this ailment should come "in fits," will be found in the relation which the muscles of the anterior part of the neck bear to, and the influence they exert upon, these tumors, when situated in the course of the great vessels, and of the trachea. These muscles, called, as they are, into action in all disordered states of the respiratory

function, produce sudden and considerable pressure upon the glands, which must exercise an additional influence upon the nerves which they compress. Amongst these is the platysma myoides. "Those who have once dissected a tumor from under this muscle, will never forget the strength of these fibres in the living body, though they appear so trifling in the dead subject. We can now understand why tumors of the neck, when they are enlarged, are pushed inwards; and that they may be larger than a superficial examination would lead us to suppose." (Shaw's Manual, p. 348.) A similar observation will apply also to the mastoid muscle, under which this chain of glands is continued, as is beautifully shewn in the engravings of Morgagni, who, to exhibit the course of the glandulæ concatenatæ, has represented one of the glands half covered by this muscle (tab. xxiv.) Even fascia, more tense at one time than another, must add to this effect. It is well known that these muscles are always vehemently exerted, in coughing, crying, sneezing, the expression of passion, and in hurried or laborious breathing; and that fasciæ are generally rendered tense according to the action of contiguous muscles: and hence it is, that the fits of breathlessness and crowing are so peculiarly apt to occur in such disturbed states of the respiratory apparatus.

Lastly, I may notice one other cause, which, being occasional only in its influence, will tend materially to explain why this complaint should thus occur in paroxysms, and why these attacks should so frequently occur in the night. I have already alluded to the means employed by nature to get rid of the secretions contained within the trachea. To the transverse bands at the back of this canal, that office has been assigned by Sir Charles Bell, and of this strong corroborative evidence is afforded by the phenomena of this disease, in which accumulation takes place from impaired sensibility and defective muscular power; as well as by an interesting pathological fact, stated by Dr. Baillie, who, speaking of the cartilaginous rings of the trachea, says, (p. 101) "Where the rings are completely ossified, the flexibility of the trachea must be much lessened; and its cavity will not admit of its being so much contracted as in the healthy state, by the action of the muscular fibres which form a part of its structure. In consequence of this, the mucus which is occasionally accumulated will not be so readily expelled by coughing; and probably the air will not be thrown out in so small a column, nor with so much momentum.

But in this office, these fibres appear to be materially aided by the muscles of deglutition. Not only is the area of the trachea, then, diminished by the contraction of these fibres, but the whole tube is drawn upwards, and the cricoid cartilage is brought into contact with the lower border of the thyroid cartilages, as was observed by Magendie, who traced a very important filament, passing from the superior laryngeal nerve to the crico-thyroid muscle, and saw, in the effort to swallow, the cricoid thus elevated. (Mem. sur l'Epiglotte.) In this way, during swallowing, the sputa, conveyed by the fibrous bands to the cricoid cartilage, are further raised by its ascent, which brings them to the very edge of the glottis, to be carried through by that short but rapid expiration which succeeds every effort of deglutition. In this way, no cough is requisite for the expulsion of the ordinary secretions. But during sleep, the trachea and fibres, themselves enfeebled, are deprived of this subsidiary agency. Accumulation is the consequence, which is well known, to all who have accurately observed this disease, to be a common precursor of an attack. This accumulation of mucus ascends and descends in the tube, as is ascertained by the sound; and, as it is well known, constantly happens with any extraneous substance, (Sir Ch. Bell, Operative Surgery; Haygarth's Do.); at length it reaches the sensible glottis: its closing muscles instantly close upon, what is now to its sides, a foreign body; and the sensibility of the membrane being unimpaired, if the opening muscles have still considerable power (as in health, when any irritating substance gets within the glottis), violent cough, of a strangling character, and occasionally with sonorous inspiration, takes place. If, by pressure upon the trunk of the recurrent, the action of these opening fibres is considerably weakened, but not palsied, the chink will be partially closed; when the air, rushing through a narrow aperture, will occasion the crowing inspiration. If, by the compression, the nervous energy be still more impaired, a fit of breathlessness will occur, which, how-

ever, will at length partially subside—either in consequence of the contraction of the closing muscles, according to the universal law which the actions of muscular fibres observe, gradually ceasing; or in consequence of the vehement inspiratory efforts overcoming the obstacle (though, after the observation of Le Gallois upon the effect of atmospheric pressure in aggravating the evil, I have little confidence in this latter explanation); or, from the temporary pressure upon the recurrent being gradually removed, when the opening muscles will proportionately recover their vigour and activity, producing first the crowing, and afterwards the more complete restoration of the respiratory function which had been suspended. But, lastly, if the pressure be still more considerable, and continuous, the closing muscles of the glottis remain contracted for so long a period, that the most vehement, perhaps sometimes convulsive inspiratory efforts, are altogether unavailing, and the child dies of "asphyxia, from impossible action of the inspiratory muscles." It may be fairly said, in the language of Capuron, "l'enfant a été réellement suffoqué."

Such is the explanation which I would offer of the very peculiar symptom which has been the subject of the preceding observations. The facts which I have adduced appear to me to warrant the conclusions which I have drawn from them. It was long before I could give up my own first impressions of the nature of this affection, and it is probable that others may have the same difficulty in yielding their assent. With my predecessors and contemporaries, I believed (without submitting it to investigation) the prevailing doctrine to be true—that this disease was essentially a spasmodic, a convulsive affection of the glottis. This, however, considerations connected with the cases which I have detailed, an inquiry into the anatomical and pathological relations of the bronchial and cervical glands, which I found so constantly attending this crowing inspiration, as well as many analogous facts ascertained by physiological experiment and pathological observation, convinced me of the unsatisfactory nature of the doctrine, and at length forced conviction upon my mind, that the malady was one essentially connected with enfeebled power, often amounting to palsy, of the opening, rather than a spasm of the closing muscles of the glottis.

I am well aware that some of the general principles connected with the pathology of particular nerves, and which I have briefly enumerated, may require proofs and illustrations in their support. It would not be difficult to adduce them. The facts, however, connected with this subject, are far too numerous to be compressed within the narrow limits to which I have necessarily restricted myself in this communication; though it appears to me to be an inquiry which may be well worthy of pursuit, and which I may take another opportunity perhaps, in some other form, of prosecuting more at large.

A very important point of my subject still remains to be noticed—the treatment of these cases, but this I must reserve for a future occasion*.

MR. AMES'S REJOINDER TO MR. BATTLEY.

ANALYSIS OF SARSAPARILLA.

To the Editor of the Medical Gazette.

SIR,

MR. BATTLEY having replied to my observations on his analysis of sarsaparilla, allow me to make a rejoinder, which shall be as brief as the circumstances of the case will admit.

I have the honour to be,
Your obedient servant,
S. J. AMES.

London, Feb. 10th, 1834.

1st. Your correspondent asserts, that instead of proving the incorrectness of his actual statements, I amused myself with criticising his words; and I frankly own they afforded me entertainment; but upon looking over my paper, I can only discover two instances of this objectionable amusement.

2d. He accuses me of obviously perverting his meaning; but if Mr. Battley shrouds his meaning under such vague terms as "volatile principle," "useful matter," "superior stratum," &c. how could he expect that he should be easily understood? yet I do not see that I perverted his meaning when I quoted almost his own words; namely, "water

* The present portion of Dr. Ley's paper concludes the pathology: the *treatment* we shall give in another number.—ED. GAZ.

takes up from the roots a large proportion of oxide of iron, and a small proportion of alumina." The plausible way in which our chemist has endeavoured to establish a perversion of his meaning, I shall hereafter notice.

3d. Mr. Battley says that Dr. Henry "identifies gluten with gelatine, which he terms a well-known principle, and in the next page speaks of its destruction." Now this passage contains more than one misrepresentation. Dr. Henry no where "identifies gluten with gelatine:" the word *gelatine* does not even occur in the page stated to contain this startling proposition. He no where terms gluten a "well-known principle;" no where speaks of its "destruction." I do not here retort the charge of *simple* perversion of meaning: Mr. Battley's rule, with respect to evidence, appears to be—not very scrupulous. Although principle is not synonymous with element, yet I conceive that "indestructible principle" is so: for example, morphia is a proximate principle, but, by decomposition, it is converted into its elements, or "indestructible principles." In detailing his future discoveries, let Mr. Battley follow the example of chemists: he may speak of the *decomposition* of *proximate* principles, but he must not talk of the *destruction* of any principle, proximate or ultimate.

4th. If Mr. Battley will learn of, instead of misquoting, Dr. Henry, I refer him to vol. ii. page 274, where he will find that—it "(starch) is not soluble in water, unless when heated to 160°; and if the temperature be raised to 180°, the solution coagulates into a thick, tenacious, transparent paste or jelly." In the paragraph now under consideration, your author recommends me to "*dissolve* a small quantity of starch in water at 150°, and filter and boil the solution: he will not be able to discover any coagulation, such as occurs on boiling albumen; no separation will take place, but the fluid will *merely* present an opaline appearance," which is owing to coagulated starch, and consequently no longer in solution. "Ex uno disce omnes." While I can support my own, and confute Mr. Battley's statements, by authorities so respectable as Dr. Henry and Berzelius, I shall not trouble myself to make any experiments which he advises.

5th. The alleged misrepresentations. In this part of the reply, Mr. Battley makes use of the vague term "volatile matter:" this I naturally supposed to be an essential oil; and if Mr. Battley has discovered any other volatile principle but that and the errors of his analysis, let him describe them. After dwelling, however, on this great misrepresentation, our chemist does not in the least degree explain the loss of the 124·5 grs. but merely states that it "occurred in the process of evaporation;" that is, he confesses to an unaccountable loss of more than 12 per cent. This loss, when compared with the results of chemists, is enormous; but, measuring Mr. Battley by himself, it is a trifle; for, in another experiment, the loss actually amounts to more than 19 per cent. In another case, namely, that of the bark of Lima sarsaparilla, div. Decoction, we find 12·8 grs. of "indestructible principles" obtained from 8 grs. of ashes. I have heard of nature's compensations, but those of Mr. Battley's art exceed them: a *loss* of about 20 per cent. in one case, is surely atoned for by a *gain* of more than 50 in another. Your readers will have perceived that Mr. Battley has peculiar methods of analysis, which are described by language equally peculiar. Thus, he says, when making me a proposal, which I need not accept, "I, for my part, will endeavour further to investigate the 10·6 grs. of ashes which *remained* after the separation of the substances recorded in the table." Now, sir, here, in order to render the passage intelligible, we must substitute *were lost* for *remained*, 10·6 grs. being the deficiency of "indestructible principles" in the analysis of 49·5 grs. of ashes.

6th. Most certainly no chemist would suppose that muriatic acid, sulphuric acid, and lime, existed in a free state, nor would any chemist so describe them; but Battley, neither in his analysis, nor has he unfortunately even in the reply, stated with what these substances are combined, and therefore the just inference to be drawn is, that neither the acids nor the lime are in a state of combination. Again, he says, "I intended to convey the simple fact, that these bodies (whether free, or in a state of combination, I do not here inquire) exist in the watery infusion." Here, he firstly intends; secondly, does not inquire: then why did Mr. Battley pre-

sume to send such a careless, unfinished article to the press, which distinctly states water takes up oxide of iron and alumina, without inquiry; because, forsooth, it was no object of his to inquire in what state of combination the substances occurred. Mr. Battley is "ready to admit that the potash should not have been omitted in the tables." This is something, and I will carry it to the credit of his candour.

With regard to the substance termed wax, but which I believe to be smilacine: if the specific gravity is 0·96, the melting point about 155° Fahrenheit, the gaseous products evolved during decomposition by heat are olefiant and hydro-carburet gases, and if it be separable into cerin and myricin, I will admit it to be wax; but not till then.

7th. I again assert, in contradiction to Mr. Battley, that every real constituent of sarsaparilla mentioned in his analysis has been previously described; and I quoted Berzelius in proof of my assertion. Mr. Battley now says that this is not the case, since of nine constituents, which I enumerate from his paper, seven are wanting in the list of Berzelius—viz. sulphuric acid, muriatic acid, potash, oxide of iron, alumina, lime, and wax. To begin with the last, Mr. Battley has not proved it to be what he has called it. With the exception of this and alumina, he will find (Annales de Chimie et de Physique, tome 32, page 248) more than twenty vegetable products, containing nearly all the rest. And I assert, that he has mistaken *phosphate of lime* for alumina, as I have proved by direct experiment on the ashes of Jamaica sarsaparilla; recently precipitated alumina being soluble in potash and soda, whilst phosphate of lime is not. Indeed, with the exception of the supposed wax, and imaginary alumina, vegetable roots commonly contain all, and more than all, the "indestructible principles" occurring in Mr. Battley's analysis. Let him take a cabbage-stalk, or, more precisely, the root of the plant, and I pledge myself that he will find it to contain, with the exception of alumina, and instead of alumina, phosphate of lime—the acids, oxide, earth, and alkali, which he has discovered in sarsaparilla.

I have, perhaps, inadvertently again referred Mr. Battley to a French author; for I find that he has misrepresented, and perhaps misunderstood, my former quotation from Berzelius, who observes, "Rose trouva du sucre dans cette racine; *qui* mérite sous plusieurs rapports un examen plus approfondi." This Mr. Battley has translated as meaning—"The existence of sugar in sarsaparilla is *admitted to require* confirmation."

To conclude, I beg to assure Mr. Battley, that his method of what he calls analysis is out of date. Since the discovery of the vegetable alkalies, he knows, or ought to know, it is more than probable that all the medicinal properties of vegetables reside in peculiar compounds, as quina and narcotine, and not in minute portions of acids, oxides, earths, and alkalies, which are obtained from their ashes. Any chemist, possessing a proper feeling for his own credit, or respect for those who have preceded him in analysis, ought to make himself acquainted with what they have discovered. This Mr. Battley has omitted to do; for he says, "with regard to pariljine and smilacine, I have not *myself* found them:" to which I will venture to add, that he omitted to do so merely because he never heard of their existence.

ON THE EXISTENCE

OF

ELECTRICAL CURRENTS IN ORGANIZED BODIES,

DEPENDING ON THE NATURE OF THE SECRETIONS;

Being the Resumé of a Paper recently presented to the Academy of Sciences of Paris.

By M. Donné, of La Charité.

1. The external integument of the body secretes from its entire surface an acid humour; but the sweat, in place of being (as is commonly imagined and asserted in books of physiology) more acid in the axillæ and about the sexual organs, is, on the contrary, alkaline in those places.

2. The alimentary canal secretes throughout an alkaline mucus, except in the stomach, where the gastric juice is strongly acid,—a fact well established by the researches of Prout, Tiedemann, and Gmelin. Thus the saliva and œsophageal mucus, down to the cardia, are

alkaline in the natural state, and only become acid under certain morbid conditions. From the pylorus to the lower end of the intestinal canal, the mucous lining yields only an alkaline secretion.

3. The serous and synovial membranes secrete an alkaline liquor in their healthy state; but the liquor becomes acid in certain diseased conditions.

4. The external acid envelope, and the internal alkaline membrane, represent the two poles of a pile, the effects of which are appreciable by the galvanometer. If, for example, one of the conductors be put in contact with the mucous membrane of the mouth, and the other with the skin, the instrument immediately indicates a deviation of fifteen, twenty, or even thirty degrees, according to its sensibility; and the direction of the current shews that the alkaline membrane is negative, while the skin possesses positive electricity.

But besides these two great surfaces, presenting opposite chemical states, there are in the body certain organs, which are some acid and others alkaline, giving rise to similar results. Between the stomach and liver, for instance, of all animals, there are electrical currents of extreme energy (*extrêmement énergiques*).

5. Electrical phenomena of the same kind have been detected in vegetables, by placing one pole of the galvanometer in the centre of the medullary canal, and the other beneath the rind or bark. It is, however, in fruits that these results have been most distinct and remarkable. A body of this sort may be considered as a pile, the negative pole of which is at the bottom of adherent fruits—such as apples and pears; but the contrary in fruits that do not adhere—such as the peach and plum. In every case it is these two points that yield the maximum of electric tension: and the electricity vanishes when the conductors are applied to the opposite sides of the fruit, at points equidistant from the centre, and in a plane at right angles with one passing through the top and bottom.

The currents in vegetables are not determined by the acidity and alkalinity of the parts, as in animals; for the juices of fruits are all more or less acid. But, consistently with the fine experiments of M. Biot, the juices which arrive by the pedicle undergo a modification at a certain point; and it may be in consequence of the difference of chemical composition in the juices at top and bottom, that the electrical states of those parts are opposed to each other.

6. The acid humours of the economy may become alkaline, and the alkaline acid in a state of disease.

7. Acidity is, in general, the result of inflammation properly so called, and the effect may be produced by sympathy in a remote organ: thus the saliva becomes very acid in inflammation of the stomach, or in gastritis.

The acid which is most usually developed in inflammatory conditions appears to be the hydrochloric; and it is the presence of this acid which, in the opinion of the writer, occasions the coagulation of the albuminous part of the lymph, or the serum, which abounds at inflamed surfaces. To this coagulation are owing the false membranes in serous cavities, the albuginous spots on the eye, the coagulable lymph of wounds, the thickenings of certain organs, and several other morbid products, in which, on analysis, nothing more can be detected than concrete albumen. Pus itself, the last result of inflammation, is produced by the action of the acid on the albuminous lymph; it is a sort of complex product of acid and albumen. And if free acid has not been always discovered in the liquids that bathe the surfaces of inflamed parts,—if pus does not always redden litmus,—it is because the acid properties have been marked and neutralised, owing to the quantities of potass and soda contained in the alkaline secretions. But the writer has given in his paper several cases, in which the pus, and even the serum, effused in the belly, in consequence of peritonitis, have been found acid. M. Dumas also supplies a case; and another will be found in the *Chemistry* of Berzelius.

9. Changes in the chemical nature of the secretions react on the different parts of the economy: they give rise to certain derangements and symptoms, which are interesting to be observed, in reference to the etiology, the diagnosis, and even the treatment of diseases. These changes, in fine, produce modifications in the electrical currents which exist between the different parts of the system *.

* Journal Hebdomadaire.

GALVANIC EXPERIMENTS

ON THE

BODY OF A FELON.

Negro Ben, the subject of these experiments, aged 26, was a stout well-built subject, the muscular tissue of the body remarkably well developed, indicating great power. He was suspended from the gallows about thirty-five minutes; and in ten minutes after being cut down was delivered to a professional friend by the sheriff, for me, and brought to a room where every thing was arranged for the experiments. The body was immediately placed on the operating table. It was discovered from the unusual freedom of motion in the neck, that it was dislocated; or, as it is called in common language, the neck was broken; and upon cutting down, in a subsequent stage of the experiments, it was satisfactorily ascertained that the first and second vertebræ (atlas and dentata) were separated by a space sufficient to admit the end of the little finger. The appearance of the face was quite natural, and seemed as if the unhappy subject had passed from life with none of those struggles and dreadful agonies which attend the throes of dissolution, and particularly in this most horrible mode of causing death.

The experiments were now commenced by a gentleman, to whom was assigned the anatomical part, exposing the par vagum. A long silver needle, similar to those used in acupuncturation, was now introduced, through the space between the ribs, deep into the substance of the heart. The object of introducing a needle into the heart was to endeavour to ascertain whether any irritability remained, and to attempt to throw some light on a disputed question, whether the heart was susceptible of excitation by the galvanic fluid.

The positive pole of the battery was now applied to the nerve (par vagum), and the negative pole to the silver needle in the heart. There was no perceptible action of the heart, as it would in all probability have been evidenced by the quivering motion of the needle if it had taken place; and in no way that we could discover was its irritability evidenced, either by the simple introduction of the silver probe, or the action of the galvanic fluid. But the effect on the other parts was very evident. The muscles of the neck and chest were affected by strong convulsive twitchings, most strikingly displayed in the platysma myoides, sterno-thyroideus and mastoideus, pectoral and intercostal muscles. There was also a convulsive motion of the muscles in the region of the stomach, and a contraction of the muscles of the throat, as in the act of swallowing.

A needle was now inserted into the tendinous head of the diaphragm, the positive wire of the battery applied to the par vagum, and the negative to the needle. The result was a slight convulsive motion extending over the chest and abdomen. The contraction and relaxation of the diaphragm was very evident from the protruding and relaxation of the abdominal muscles; the effect seemed to increase as the acid had time to act on the battery. The positive wire was now applied to a needle inserted into the seat of the phrenic nerve. An incision was made down to the tendinous head of the diaphragm, and the other wire (negative) applied to the incision. The result was very similar to the preceding experiment, with the addition of an agitation of the chest, compared by an intelligent observer to that of a person affected by hiccough.

I think it proper to notice, at this stage, a peculiar action of the galvanic fluid on the nerve and muscular fibre, observed by myself, and confirmed by one of the gentlemen assisting me. The positive pole, whenever it touched the nerve or muscle, produced an action or whitening very similar to that which is produced by lunar caustic when applied to an exposed muscle.

The supraorbital nerve was now exposed, and the positive pole applied to it, and the other below the lower lid. The result was a contraction of the muscle, causing a natural wink, and an opening and closing of the eye-lids, which was compared to that when the eye closes in a living person from fear of being injured by some offending object being thrust at the eye. There was also a contraction of the muscles of the cheek, similar to what is seen in some persons who suffer from neuralgia of the face; or like that motion of the cheek, when an effort is made by the motions of the face alone to drive off an annoying fly which has settled upon it.

In the next experiment a silver needle

was introduced into the facial nerve, one pole applied to it, and the other to the cheek. The effect was slight motions of the face, and distention and contraction of the sides of the nostrils, resembling much the expression of disdain. The effect on this and the preceding nerve was very slight, compared with that produced by Dr. Ure, and so vividly painted by him. He says, "the expressions of rage, terror, anguish, and ghastly smiles, were produced, and united their hideous expression in the murderer's face, surpassing the wildest representations of a Fuseli or a Kean." In these experiments on the muscles of expression, with the exception of the expression of disdain, as before mentioned, none of those wonderful plays of the features were well marked, which are so manifest when the countenance is animated by the mind, in its varying conditions of wild passion and pleasurable emotion.

The hypoglossal, or ninth pair, was now touched by the positive pole. An interesting result ensued, in the production of motion of the tongue alone. The positive wire was applied to the silver needle inserted in the facial nerve, and the negative to the tip of the tongue, when a very striking effect was produced, characterizing this as one of the most interesting experiments performed. The result was a rapid vibratory motion of the tongue, compared by several gentlemen to that of a serpent's tongue when alarmed or enraged. There was also a swelling or bulging out of the flesh or muscles under the lower jaw, which was agitated by a quick vibratory action. The next experiment was the application of the wire to the muscles which assist in closing the lips and mouth. The result reminded me of the action of the lips when a person is muttering to himself, or about to utter words in a soft low voice. The expression of countenance of the criminal in this stage of the experiment, caused a stare of amazement in many of the spectators.

The median nerve was now exposed, and an incision made into the middle of the little finger—positive pole applied to the nerve, and negative to the little finger. A most interesting and vivid display of the galvanic power was the consequence. The arm raised itself from a horizontal position with so much strength and violence, as to require the exertion of considerable power in the operator to restrain its freedom. It repeatedly made efforts resembling those of life, to jerk its hand away from his grasp, and when permitted, struck against the chest with great violence, settling in the attitude of a pugilist when prepared to defend from the attack of an adversary. These phenomena continued about half a minute, and then ceased. The poles of the battery were then removed, and soon after re-applied. The same phenomena ensued with equal violence upon the repetition of this experiment several times.

The ulnar nerve was then transfixed with an acupuncturing needle in the elbow, and positive pole applied to it, and negative to the little finger. The effect produced was a rapid motion of the fingers, but in a manner which was particularly striking to all who witnessed their action. Instead of being flexed at the same time, they moved sometimes rapidly, at others in a more gradual motion, but alternately being greatest in the little finger, which was the most flexed, and diminishing towards the fore finger. The motion of the fingers in this experiment was compared by one to that when playing on the flute, and by others to the action of a violin performer when in playing he works upon the strings of that instrument.

A needle was now introduced into the spinal marrow, through the vacancy caused by the separation of the vertebræ, and another inserted into the heart and head of the diaphragm; but little effect was produced, other than the quivering motion of the muscles of the neck and chest. The spinal marrow being now completely exposed in the neck, positive wire applied to it, and the negative to the foot, the effect was not remarkable; there was a slight convulsion of the muscles of the limb.

A needle being now inserted into the sciatic nerve, and another in the ham, there resulted a spasmodic action of the large muscles of the thigh; when the needle was changed to the inside of the foot, and the positive pole applied to the one in the ham, and the negative to that in the ankle, a much more marked and decided effect was perceived. The leg vibrated strongly (the subject lying on the abdomen); a swelling of the muscles of the calf of the leg; the toes were flexed, and extended with considerable

freedom, at an angle quite as much as when extended in the act of stepping or walking.

With these the experiments ceased, the body having become externally cold, and the irritability sensibly exhausted; the power of the battery appeared also very much diminished, which will account for the weakened action produced in the last experiments*.

OBSERVATIONS

INTENDED TO ILLUSTRATE THE QUESTION,

On what morbid state does the occurrence of Coma, and sudden Death in Jaundice, depend?

By W. Griffin, M.D. Limerick.

A poor woman requested me to visit her daughter, Mary Barry, aged 20 years, who she informed me had been three days ill, and was now speechless, and she believed dying. On entering the cabin in which she lived, I saw her make a faint expiration, which proved to be her last, as she was quite dead when I reached the bed. Her skin was still warm, and universally tinged with a deep yellow colour. The countenance was hydropic, and the pupils dilated. On inquiring, I found the girl's ailment had set in with languor and heaviness; on the second evening she was seized with sickness of stomach, vomiting, and appearances of jaundice, and next morning complained much of her head. She then looked so very ill, that her mother began to get alarmed, and insisted on her going to the dispensary for advice; the poor girl shook her head despondingly, and said she was too weak to walk there, but that she would go into the room and lie down on the bed. These were the last words she uttered. When the mother went in afterwards, there was an appearance of stupor about her, from which she endeavoured to rouse her, but could get no reply. She was in profound coma!

In about three weeks after, I was called to see Ellen Barry, a sister of the former, and found her labouring under an affection precisely similar. She had been attacked with languor and heaviness, followed by sickness of stomach and vomiting, with universal yellowness of the skin. She was now in imperfect coma, conscious when roused, but unable to speak, and very unwilling to be disturbed. From this very dangerous state she was rescued by active and continued purging; the yellow tinge gradually disappeared, and in a few days she regained her usual health.

Within a very short period afterwards another member of the same family was attacked, a boy, of about thirteen years of age. My brother was requested to see him, and found him moaning and comatose, his belly tender to the touch, his pulse slow, and his skin of a saffron colour; his breathing was not stertorous. This case was more sudden than either of the foregoing; the boy was seized with sickness of stomach and vomiting at night, and in the morning was jaundiced and insensible. In this state he lay until nearly the end of the second day, without medical aid, up to which period his bowels had not been moved. An ineffectual effort was then made to purge him; but he was unable to swallow, and died in a few hours.

The parents were now, it may be supposed, highly apprehensive for their remaining children, and the event proved not without just reason. After the lapse of a few months their next boy, John Barry, aged eleven years, shewed symptoms of jaundice. He grew languid and heavy, and in two days the tunica albuginea and skin were of a deep yellow. There was great sluggishness of the bowels, and slight tenderness of the abdomen, but very little pain. He did not complain of his head, but, like the others, was seized with sickness of stomach and vomiting. I had early notice of this attack, and was vigilant in looking for the supervention of coma, although, from any existing symptoms, there was no greater reason to apprehend it than in any common case of jaundice, if I except some slight dilatation of the pupils and sluggishness in their movements. The boy was up and about, and did not in fact appear to be very ill; but the fate of his brother and sister left a lesson not to be forgotten, and I accordingly warned the mother to give me instant notice on the occurrence of the slightest stupor,—he was in the mean time actively purged. There was little change in him that night or the next, but on the succeeding morning I

* Condensed from a paper by Dr. J. Dunbar, in the Baltimore Medical Journal.

had a messenger with me at an early hour, to say that he had fallen into a state of insensibility in the night, and could not now be roused. I found him quite comatose, with slow pulse, dilated pupils, and almost a total loss of sensation and voluntary motion. On pinching his hand severely, however, he evinced signs of consciousness, moaning slightly, and slowly drawing his hand away. Ten ounces of blood were immediately taken from the temporal artery; the head was shaved, and kept wetted with refrigerant washes, and castor oil was administered every fourth hour. As the bowels were slow in acting, injections were given at night, and large blisters applied to the nape of the neck. These had the desired effect. He was copiously purged for several hours, and in the morning evinced signs of returning consciousness; from thenceforward there was, day after day, a steady and progressive improvement, until his recovery became fully established. Some time after, his friends were once more alarmed by a recurrence of the vomiting and jaundice: but the progress to coma was arrested, and the complaint readily removed, by full purging alone.

These four cases of jaundice running rapidly into coma, which in two of them terminated in death, when we consider that they occurred in one family, within a few weeks of one another, and without any unusual or remarkable symptoms which could indicate the impending danger, suggest a very important question with regard to the pathology of the disease: "On what morbid state did the occurrence of coma in these particular instances depend?"

In referring to the works of different authors who have written on the subject of jaundice, it surprised me much to observe, that the occasional supervention of coma and sudden death is scarcely adverted to. This is not noticed even by Cullen or Parr, as a possible termination of the complaint, nor is there any mention made of it in some of the more modern medical treatises, a circumstance perhaps scarcely deserving of remark if the occurrence was really rare. We might offer many evidences to prove that it takes place too often to be left at any time out of view in our consideration either on the prognosis or treatment of the disease. Mr. Gilbert Burnett and Dr. Macleod, in a discussion on the subject three years since at the Westminster Medical Society, detailed several cases, which with few appearances indicative of danger, ran rapidly to coma and death, and those published by Dr. Marsh in the Dublin Hospital Reports, illustrating the occasional connexion of jaundice with disease of the brain, were probably of a similar nature. Dr. Gregory, of London, calls our attention to the probability of such terminations in severe cases, and Dr. Mason Good speaks of the supervention of apoplexy in green jaundice, chiefly in instances where the pulse was unusually slow. But it is neither in severe instances of the disease, nor in that intense form of it which has been called green, that it most frequently occurs; and nothing so clearly proves how little we really know of the pathology of these affections, than the fact, that the probability of the supervention of coma bears no relation to the intensity of the symptoms. In Dr. Macleod's cases there was little to indicate danger, until fatal coma occurred in one, and epilepsy, followed by coma and convulsions, in the other. In three of the instances which have preceded these remarks there was nothing that could lead one to anticipate immediate danger of any kind, until actual stupor commenced: they were not cases of green jaundice, and previous to the occurrence of fatal symptoms could not even be called severe or unusual.

The general connexion existing between jaundice and certain affections of the brain or nervous system, which attracted the attention of physicians at a very early period of time, and to which the occurrence of the disease from intense passions of the mind has been attributed, while it tends to diminish our surprise at the occasional occurrence of coma, furnishes no clue to the subsisting relation; several explanations have from time to time been offered by those who have paid any attention to the facts, but none that are at all satisfactory. Unfortunately no post mortem examination was permitted in any of the fatal cases which I have mentioned. In one of Dr. Macleod's, that of a young woman who had jaundice for some time, without suffering much inconvenience from it, but who died in 48 hours after the supervention of coma; the only morbid appearance observed in the brain appeared to be, a deep yellow colour of all the membranes.

Although the yellow colour of the skin and eyes has in these cases been always the first circumstance to attract attention,

the mutual sympathy, which is known to exist between the brain and liver, have led to a very natural doubt as to which might be the primary seat of disorder, and in fact, in this lies much of the difficulty experienced in endeavouring to explain its pathology. Those who have considered the affection of the head as secondary or symptomatic, have attributed it to a plethora of the circulation in the brain, occasioned, like the jaundice, by a gorged state of the liver, equally obstructing the passage of blood and bile, or to a supercarbonization of the blood, for want of due elimination by the liver, or to a highly azotised state of it from the same cause, the brain being affected in either case as it is in apoplexy from the circulation of venous blood, or lastly, to some such sedative effect of absorbed bile on the cerebral organ, as may be induced by opium or other narcotics. On the other hand, those who have considered the jaundice in these instances, as secondary or symptomatic only, have supposed some oppressed or actually diseased state of the brain, making for some time an insidious progress, and at length manifesting itself by suspending the functions of the liver. An accumulation of bile in the blood vessels, it is said, takes place as a necessary consequence, and precedes, though it be no way necessary to, the termination in coma, which is simply the conclusion of the original affection.

Glancing at these conjectures in the order in which I have stated them, it may be remarked, that no such gorged or infarcted state of the liver has been made out in the cases alluded to, while, I believe, in others where such condition of that organ did exist to an extreme degree, there was no supervention of coma; and again, one should suppose, where the danger depended on pure plethora, the complaint would be easy of remedy, which is by no means the fact. It might, perhaps, be said, this idea of a plethoric state of the circulation in the brain, derived some countenance from the two recoveries quoted, one by pure purging, the other by purging, bleeding, and blistering: but these remedies are equally applicable to other morbid conditions of that organ.

If the elimination of carbon and azote from blood be one of the chief offices performed by the liver, its total suspension must necessarily lead to a loaded and deteriorated state of that fluid. That such a state occurs to a certain extent, in almost all cases of jaundice, we have manifest proof in the general langour complained of, the slowness and feebleness of pulse, and altered nature of the secretions. That it sometimes leads to actual coma and death, has been already shewn, and that the presence of bile in the circulating system, when artificially introduced, produces analogous results, appears from Mr. Phillips's experiments, in which two drachms of bile, injected into the femoral vein of a dog, in a few hours occasioned jaundice, dryness of mouth, vomiting, coma, and death; and in a lesser quantity, effects of the same nature, though less marked.

It would seem superfluous to seek for other proofs of the injurious effects of retained bile, if those I have instanced were any way constant in their occurrence. But that they cannot be received as such, and that they are rather the exception than the rule, must be obvious, when we recollect, how many persons, in whom every texture of the body is deeply imbued with yellow bile, while not a particle passes into the intestines, live for months and years without suffering much inconvenience, and how infants have grown rapidly, and thriven tolerably, where the hepatic ducts were altogether impervious. It is clearly unphilosophical to attribute effects in one case to a cause which in nineteen others seems incapable of producing them; but setting these considerations aside, and viewing the question physiologically, there is after all, no just reason for inferring a supercarbonized or azotized state of the blood, from the non-elimination of bile. Tiedemann and Gmelin have made it appear exceedingly probable, "that the pulmonary and biliary organs are, in different tribes of animals, nay, even in different individuals of the same species, in a state of antagonism to one another; that the size of the liver and quantity of bile are not proportionate to the quantity of food and frequency of eating, but inversely proportional to the size and perfection of the lungs." That in fact, as a secreting organ, the liver is chiefly excrementitious, assisting the lungs and cutaneous surface in decarbonizing the blood, and consequently, when interrupted in its function, the duty is merely transferred to the latter, which immediately take on an increased action. To that beautiful relation and correspondence subsisting between all the organs of the body, and especially

those engaged in nearly similar functions, we are indebted for the impunity with which we can occasionally suffer the temporary suspension of any of them, and in no instance is this more strongly illustrated than in jaundice, in which the interruption of the hepatic excretions, those of carbon and azote, is met by increased decarbonization in the lungs and skin, and increased excretion of highly azotised principles by the kidneys. Although it seems improbable, that a poisonous state of the circulating fluid can occur in this manner, the occasional consequences of jaundice necessarily countenance the less definite conjecture, that bile retained in the circulation acts, at all events, in some way or other, as a sedative on the brain and nervous system. To this idea may be traced the frequent application in practice of many influential remedies, and the still more frequent attempt at explaining the most striking phenomena in very obscure affections, by referring them to obstruction in the liver. It is clear, however, we can as yet go no further than to admit some connexion between these effects and their supposed cause, as they bear no regular proportion to it in their intensity, and are anything but necessary results. We know no more why sedative effects should result from obstruction to the flow of bile in some instances, than we do of their total absence in others.

An endeavour has been made to draw some distinction between cases of jaundice in which the bile is not eliminated by the liver, and those in which it has been secreted and reabsorbed. That such distinction exists, and that the former are of a more dangerous nature than the latter, inasmuch as they necessarily include either paralysis, or great disorganization of the organ, no one can deny; but it does not follow from this, that the system sustains more injury by the want of elimination of bile, than by its secretion and absorption. The cases usually end fatally, not because the blood is more vitiated, but because the vitiation, such as it is, varies from, and is accompanied by more serious disease. If, then, we cannot account for these cases of sudden coma, by any absolute effects of retained bile, it only remains for us to inquire whether they might not be explained on the supposition of previous cerebral disease.

There are very many interesting facts, which would tend to shew, that the brain is, in some instances at least, the organ primarily in fault in jaundice. Besides the well known occurrences of abscesses, and other diseased states of the liver, from injuries of the head, sudden yellowness of the whole person has not unfrequently followed intense mental emotion, and has often been observed in fevers, and other diseases in which the brain and nervous system have been much affected. Some of the cases published by Dr. Marsh, to which I have already adverted, seem to have depended on an affection of liver, and of the mucous coat of the intestines, originating in cerebral disease. If, in such instances, we could suppose the affection of head to be so obscure as altogether to escape the attention of the practitioner previous to the occurrence of jaundice, there would be little or no indication of an unusually dangerous form of the disease. He would almost necessarily attribute the headach, languor, and sickness of stomach, to the retention of bile in the circulation and supervention of coma, and apoplexy would seem sudden and unaccountable, when, if he could have suspected the source of the disease, it would have been anticipated as a very probable termination.

We have not, unfortunately, a sufficient number of reports of post mortem examinations in those cases, to form any decided opinion on the subject. If, with such imperfect materials, even a conjecture might be hazarded, I should, on the whole, be disposed to say, that the cerebral affection is rarely the primary disease, but is superinduced, we know not how, by the suppression of a most important excretion, as it sometimes is in the suppression of the catamenia, and almost always of the urine. When we find inflammation of the brain or its membranes, suddenly brought on by obstruction of the uterine or renal discharges, we cannot be surprised that a suppression of one of the most important in the whole system, whether as a secretion or an excretion, should occasionally induce it. That the occurrence of coma in jaundice generally depends upon some such state, suddenly induced, and not upon previous or long standing cerebral disease, would seem very probable, from the success of the treatment, and rapid recovery of two of the cases reported, and from the fact, that in the only one of Dr. Macleod's in which there was an examination after death, no disorganization of the brain

was discovered. I cannot tell why cerebral inflammation should arise from obstruction to the flow of bile in one instance, and occasion no such results in a hundred others, any more than I can account for its somewhat rare occurrence in suppression of the menses. These observations are offered, however, not with a view to the solution of the difficulties which have been pointed out, but as a faint light to the practitioner, until the question can be investigated with some prospect of success*.

REMARKS ON MEDICAL REFORM.

To the Editor of the Medical Gazette.

SIR,

I beg leave to offer you the following remarks upon the subject of medical reform.

The profession, the public, and parliament, seem all agreed as to the necessity of some change, that may secure the sick against ignorant and empirical practitioners, and may confirm to the well-educated and scientific professors of the healing art such rights and privileges as are essential to their welfare and respectability. The Apothecaries' Act of 1815, the only statute now in force that has any material bearing upon the medical profession, is very generally allowed, notwithstanding the great public advantage which has resulted from it, to have failed of meeting all the exigencies of the case to which it was applied. It therefore only remains for us to contrive a method by which all the benefits of the present enactment may be preserved, at the same time that such improvements are added as we most have experienced the want of. Agreeing with a recent correspondent of yours, that the less legislative interference there is in the details of our profession, the better, I still think we cannot quite dispense with the aid of parliament, if it be only to remove the burdens which it has thrown on us. And this aid may be exerted in two ways:—

1. By duly modifying the Act of 1815; or,

2. By repealing that Act, and providing an efficient and improved substitute.

Retaining the Act now in force, it would be advisable to make the following alterations:—

1. To repeal clause 3, which gives a right of searching the houses, and examining the drugs of apothecaries. Such authority might, perhaps, be justly exercised over chemists and druggists, who have less interest than the medical practitioner in the effects of medicines when prescribed.

2. To repeal clause 5, which compels apothecaries to dispense the prescriptions of physicians. This compulsion, too, would be more fairly applied to the druggist.

3. To exempt from the operation of clauses 14, 20, and 21 (which disqualify for practice in England and Wales all apothecaries not licensed by the London Company), all who are qualified to practise in Scotland or in Ireland.

4. To repeal clause 15, which demands an apprenticeship, and to substitute a clause forbidding the examination of any candidate who has not a diploma in surgery.

5. Abolish clauses 17 to 20, which relate to apothecaries' assistants.

6. Repeal clause 28, which perpetuates to chemists and druggists certain privileges undefined.

7. Introduce a clause obliging chemists and druggists to undergo an examination before they dispense prescriptions; and to sell or dispense no medicines or poisons without either the name or directions for use being affixed to them.

8. Let a penal clause forbid any directions for use to be affixed, unless on prescription of a qualified practitioner, except in the case of patent medicines; and, indeed, the custom of giving patents for secret remedies cannot be too soon abolished. Even advice, when given by an unqualified person, and for money, ought to be made penal. The duties of an apothecary ought to be well defined, and the legality of his claim to remuneration for advice ought to be explicitly declared.

Supposing, however, that the present act is repealed, it will be sufficient that, in the new one, a few general principles be well laid down; as, for instance,

1. That no person shall undertake the treatment of any bodily disease, injury, or infirmity, unless he has been licensed

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* Dublin Journal of Medical and Chemical Sciences.

to practise medicine, surgery, and midwifery.

2. That candidates for such license shall give proof of having spent four years in medical study.

3. That no person shall receive the degree of Doctor of Medicine until he has passed his examination as a general practitioner; and that none but the graduates of Universities shall (under any new arrangement for conferring degrees in London) be entitled to examination for the doctorate, until they have been in general practice for four years.

4. The self-elective system of the governing bodies of our medical corporations should be at once put an end to; and then all other details of medical jurisdiction than those already specified, might with safety be left to the discretion of the medical community.

Among the private arrangements between medical men that it would be desirable to establish, I should recommend that no M.D. should give advice without the co-operation of a general practitioner, who would, as a matter of course, prepare the medicines; and from his more frequent intercourse with the patient, would be of no small use in consultation with the prescriber. Barristers (except in Court) will give no opinion but on being applied to by an attorney. Physicians, on the contrary, very often condescend to meet chemists and druggists in consultation. The counsellor might as well debate on a case with a law stationer.

Medical practitioners ought not to retail drugs—*e. g.* pennyworths of jalap, ointment, and goulard-water. Yet, as things are at present, the apothecary is fearful of referring any applicant to a druggist, lest the wily shopkeeper should convert the customer into a patient.

But how is Parliament to be induced to take up the subject of medical grievances in an earnest and comprehensive spirit? By petitions and by deputations from the body of general practitioners throughout the whole kingdom. Not merely should the medical men of the capital bestir themselves, but those of every town in which two or three "doctors" are gathered together. The respectability, the very subsistence of every practitioner in the British empire, depends in no small degree upon his readiness to come forward at this crisis, and claim his true rank and his rightful privileges at the hands of his countrymen in parliament. And let no sordid and short-sighted jealousy of Scotch or Irish graduates prevent us from combining to attack an enemy far more formidable to ourselves, as well as to the public. The QUACK, and above all the DRUGGIST QUACK, is the common foe of the profession and of humanity. Let us join in earnest to annihilate *him*, and we can afterwards adjust our own differences easily and amicably.

I am, sir,
Your obedient servant,
Φ

Feb. 14, 1834.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

The Dublin University Calendar, for the Year 1834. Simpkin and Marshall.

THE University of Dublin—which holds a charter originally granted by Queen Elizabeth—which has its professorships royally endowed—its five and twenty fellowships—seventy scholarships—besides numerous exhibitions and provisions for the advancement of science and literature—which possesses many church livings, and a large landed property, the source of great wealth—and which, finally, sends two members representative to the reformed Parliament,—is after all very little known on this side the channel. Perhaps the explanation of the fact may be found in the circumstance, that the great mass of its students become churchmen and lawyers; but however this be, we more than suspect it is to its medical school, which is comparatively of recent date, and which, we believe, enjoys no very great share of favour or patronage from its alma mater, that it is chiefly indebted for keeping its reputation alive in this part of the world.

How were people here to know much about the Dublin University? Few seats of learning have been so inactive; few and far between have been the productions emanating from it, that would tend to give it a character for efficiency or utility; its love of silence has been almost turned into a proverb. We happen to know

that, till recently, every obstacle was thrown in the way of those who would publish any account of the transactions of the University; not only was every facility withheld by the heads of the establishment from those who would bring them to the notice of the public, but every such proceeding was directly discountenanced.

It must surely be looked upon as a sign of the times, that a Calendar has at length made its appearance; and perhaps the want of such a work of reference hitherto has not a little contributed to fix the character of obscurity on Dublin College. While Cambridge and Oxford have for many a year had their Calendars, to afford every information to all parties requiring it, Dublin, except to those on the spot, and who had some special object in making personal inquiries, never supplied any intelligence in any shape. The volume before us is the second that has appeared; and we only hope that it will be continued yearly in the same form, for it is as excellent and satisfactory as can be desired.

On all points connected with the general business of the University, the information which is here to be found is ample and interesting; and that part relating to the school of medicine is both valuable and curious.

Until the year 1785 the means of medical education in Dublin were very limited; but an effort was then made, the result of which was, to convert the three lectureships of anatomy, chemistry, and botany, into regular professorships; and these being connected in a sort of partnership with the chairs erected on Sir P. Dun's foundation, a complete school of physic was established.

Some of the relics of the old Collegiate school are still in existence. "The anatomical collection belonging to Trinity College is one of the most ancient in the united kingdom. It is understood that many of the preparations are seventy years old, some of them evincing a knowledge of the art of displaying minute structure not excelled in modern times." But the principal museum of anatomy in Dublin College is the private collection of Dr. Macartney. "The preparations illustrative of human and comparative anatomy (in this collection) fill the lower portion of the room; and in the gallery there are upwards of 2000 specimens of diseased structure." One cabinet in this museum is of a curious nature. "It contains examples of the changes which take place after death, according to the several modes of disposing of the body, as practised by different nations."

The wax works of the old anatomy house, which had a great name in their day, are thus noticed:—"The collection of wax figures, which is now placed in a building behind the anatomy house, was formerly greatly esteemed; but there is little value set on it at present—the figures being found to possess, in common with almost all wax works, the fault of exaggerated representation."

It would be rather overstepping the boundaries of our province to enter into a more particular analysis of this volume; but we may say of it generally, that it is fully calculated to satisfy all who have a desire to be more intimately acquainted with the affairs of the Irish University; and the accuracy with which the whole has been got up, reflects great credit on the ability and energy of the learned editor.

Alphabet of Medical Botany, for the use of Beginners. By James Rennie, M.A. 1834.

When books are published which profess to furnish beginners with details "more trustworthy" than are to be found in other introductory works, which we are told "are only fitted for making smatterers," it becomes us to examine the grounds on which such books claim a superiority; and if, after weighing them in the balance, they shall be found wanting, to make known their true value to beginners, that they may not prove hurtful, instead of useful, to them.

In the case of the present work we enter upon the examination the more readily, as we shall thus become entitled to the gratitude both of those who sell and those who have bought it, since we are informed, that "any hints, or corrections of mistakes, sent, *free of expense*, to the publishers, will be gratefully acknowledged." While we admire the moral candour of this intimation, we are inclined to censure the calculating spirit which led to the insertion of the clause, "free of expense;" for we cannot understand on what principle the public are expected

to pay for error, and the publishers refuse to pay for truth. But, perhaps, it was dictated by a prophetic spirit, which foresaw that the expense incurred by paying communications correcting the errors of these scientific "Alphabets" would greatly exceed the profits of selling them. If so, we commend the wisdom of the children of this generation.

This being an Alphabet of *Medical* Botany, the professor, in the beginning, informs beginners, that the word "medical" is used as *fama* sometimes is, both in a good and bad sense; the good sense being synonymous with "medicinal," and the bad with "deleterious." Now, when the beginners have spent a few years in study, and passed their examinations, they may hear themselves called "medical" men, and recalling the definition of "medical" in their botanical hornbook, they may be at a loss to know whether they are so designated in a good or bad sense. In our simplicity, we have always believed that medical men invariably did good; but these were "medicinal" men; while some — though we know none such — who do harm, are "deleterious:" such, perhaps, there have been, for we recollect Sydenham says, that some medical men do harm,—"nimia diligentia." It seems to us that it would have answered the purpose to have stated, that the book treated of all those plants with which it was necessary or proper that medical men should be more particularly acquainted. Let us now see what sort of acquaintance with them they will acquire from this book.

At page 16 they will be told that the genus *Piper* belongs to the Jussieuan order *Urticeæ*; while, at page 112, they will be told that it belongs to Piperiteæ: here the beginner will ask himself, "which is the more trust-worthy, p. 16 or p. 112?" We recommend him to trust to p. 112, as it never belonged to Urticeæ, though in the first draft of the Jussieuan method, it was placed among the "Genera Urticeis affinia," a position to which it is unquestionably entitled.

At p. 119 we are told that "the saffron of commerce consists of the long filaments." Now, as in every other part of the book a filament is considered as a part of the stamen, we should conceive that saffron was the stamens of the crocus: other books (but they are *less* trustworthy) inform us, that the stigmata constitute the saffron.

At p. 26 we are told that Cinchona lancifolia is the original and best Peruvian bark. We are not told what kind of bark, pale, yellow, or red; but assuming that it is pale bark, we beg to inform the professor, that it is the very worst kind which can be found, the best being obtained from the C. condaminea, *Humb.;* and to affirm that the C. cordifolia is the source of the best yellow bark, shews that he has never consulted the second edition of Lambert's Illustrations of the Genus Cinchona, or any trustworthy book.

At p. 28 Menyanthes is referred to the Jussieuan order *Lysimachiæ;* at p. 121 to Gentianeæ: *crede ultimæ paginæ* say we to the beginner, for a more recent catalogue must have fallen in the way of the professor, before he began to transcribe p. 111, *et sequentes.* This latter catalogue is not free from errors, since in it the genera Allium, Aloes, and Scilla, are referred to Siliaceæ, instead of Asphodeleæ; and the genus Styrax to Diospyreæ, instead of Styraceæ. Moreover, the genus Amygdalus does not belong to Rosaceæ, but to Amygdaleæ; so also Prunus.

At p. 46, Laurus, we are told, has no calyx: now, though it is not worth disputing about, whether its single floral envelope shall be called calyx or corolla, (though it can be easily proved to be a calyx,) yet the author shews utter ignorance of the incontestible differences between the genus Laurus and the genus Cinnamomum.

At p. 52 Quassia is referred to Magnoliæ, at p. 131 to Simarubeæ; and many similar contradictory statements are to be met with in the 140 pages of which the book consists. Instead of detailing these, we would rather point out some other errors.

At p. 69 we are supplied with a new etymology for the Linnæan class Didynamia. Stand up, professor James Rennie, A.M. "Unde derivatur, Didynamia?"—"From the Greek δις, *twice*, δυο, *two*, and νημα, *a filament*; twice two are four,—because it has four stamens." Shade of the great Linnæus! if astonishment will allow you to speak, say, "Whence Didynamia?"—"From δὶς, and δυναμαι; because two of the stamens being longer than the other

two, I have considered the two long stamens as the only powerful, the only efficient ones." Let the professor of Zoology of King's College ask the professor of Natural Philosophy, what he means by "dynamics;" or let him ask the professor of Medicine, what kind of fevers are termed "adynamie."

At p. 74 we are favoured with a derivation still more extraordinary, of "Tetradynamia," from the Greek τετρα "four," δυο "two," and νημα "a filament." Softly! Mr. Professor, if twice two make four, four times two must make eight. Now, where are any plants having eight stamens to be found in the class Tetradynamia? Not having received any instructions from Linnæus in person, we have always been taught by works (which, to be sure, are not trustworthy) that this class was so named because four of the stamens were longer, and supposed to be more powerful than the other two.

At p. 53, the names of three plants following in succession are all incorrectly spelled.

P. 121, Erythrina is a genus belonging to Leguminosæ, not Gentianeæ; Erythræa, indeed, belongs to Gentianeæ.

P. 125, Exostemma, being neuter, requires the adjective to be "floribun*dum*," not "*da*;" and "caribæ*um*," not "*a*."

Lastly, the Meliaceæ are the bead-trees, not bread-trees.

Need we ask our readers what they think of this work? We fancy not, for they will have already classed it among those which "are only fit to make smatterers."

MEDICAL GAZETTE.

Saturday, February 22, 1834.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

STATISTICS OF THE PROFESSION IN SOME OF THE CAPITALS OF EUROPE.

NOTHING is more strikingly calculated to impress observers with the necessity of some change in the state of the profession in this country, consistently with the spirit of the times, than the fact,—that the metropolis itself is so scantily supplied with medical men of the first order, or who have received the highest sort of education, and that the great mass of the profession in London consists of surgeons and general practitioners. It is just the reverse in other capitals of Europe, wherever a reform suited to the circumstances that demanded it has been effected. In Paris and Berlin, for example, the Doctors-graduate of Medicine and Surgery form by far the largest portion of the medical practitioners in those cities: and there being pretty nearly a proportionate supply of accredited professional men, in point of numbers, in London, Paris, and Berlin, it is not unfair to presume that the population of the two latter capitals is better provided for than our own, in respect to medical service; nay, it is more than a presumption, for we know the amount of education which is required of those graduate practitioners in both France and Prussia, and we can compare it with what is demanded of the diplomatists of the College of Surgeons and of the Society of Apothecaries among ourselves.

But, first, let us take a statistical view of the numbers of the profession, compared with the population, in the capital cities just mentioned; after which we shall offer a few remarks that naturally suggest themselves. We are sorry that an approximation is all we can offer for our own metropolis, in consequence of the unaccountable inattention which is paid to statistical matters generally—and to medical statistics and police in particular—by our government. But we are satisfied that the numbers which we give, as regards London, are not very inexact, and do not in any very essential points differ from the truth:—

Capitals.	Population.	Graduate Physicians, &c.	Surgeons and General Practitioners.		Total.	Proportion to Population.
London	1,500,000	225	1525		1750	1 : 857
			Drs. of Surg.	Off. de Santé.		
Paris..	935,108	925	36	123	1084	1 : 862
			Surg. 1st Cl.	Surg. 2d Cl.		
Berlin	249,086	228	9	65	302	1 : 825

It is curious to observe here how nearly the ratio of medical supply tallies in each of these cities; that is to say, the supply of accredited practitioners: for of the supply of the unaccredited or unqualified, we can scarcely take any account, though it is easy to infer in which quarter quacks most abound. The official return for Paris from which we have borrowed what relates to that city, in the above table, mentions that there were then (1832) 300 persons practising in the French metropolis *without any qualification.* In Berlin, owing to the strictness of the medical police in Prussia, we have reason to suppose that there are not many contraband practitioners; while in London, it need scarcely be said, how they swarm, where the medical corporations have so little power or encouragement to check even the most undisguised empiricism. The chemists and druggists of London are supposed to be between 6 and 700, all or the greater part of whom meddle uncontrolledly with medical practice; while in both the other capitals, the *pharmaciens* of the one, and the *apotheker* of the other, are not only comparatively few in number, but strictly restrained from other business than the preparing and vending of medicines, and dispensing the prescriptions of the authorized practitioners. We know not the exact number of *pharmaciens* at present in Paris, but in 1826 they did not exceed 180. In Berlin there are no more than 31 apothecaries, all of the first class, and they are found amply sufficient for a population of about a quarter of a million: there are no apothecaries in Berlin belonging to the second class.

These, however, are points of minor consideration: that to which we desire to call attention at the present moment, is the extraordinary disproportion of the supply of graduate or first-class practitioners in London compared with that in the other cities under our notice. There are actually more graduate physicians, it appears, in Berlin than in London, though of Berlin the population is not the sixth part of that of our capital; and in laying down the number above given (225) for the total in London, we rather think we exceed the true amount, for the whole of the resident members of the College of Physicians—Fellows, Candidates, and Licentiates—fall somewhat short of 200, and there are very few respectable graduates *practising* in the metropolis not belonging to the College: we suspect their number hardly makes up the residue.

Now this allows, in London, no more than one graduate practitioner to every 6666 of the population—while in Berlin there is one for every 192: and this, whilst there is in either capital nearly an equal numerical proportion of medical assistance. In Paris, we find that there is a first-class practitioner for every 1010 of the population, the number of graduate physicians in that capital being

about nine-tenths of the whole number of the medical body; while in London the ratio scarcely exceeds an eighth!

Such a marked disproportion indicates at least one thing very distinctly—namely, that there are undue difficulties in the present state of things in the way of British practitioners attaining the first class of their profession—for we cannot for a moment suppose that the great mass of the *corps medical* of this metropolis would prefer being surgeons and general practitioners, contrary to what we see is the case in Paris and Berlin, rather than mount a step higher, and become Doctors of Medicine and Surgery, if reasonable facilities were afforded them: indeed, the tendency to do this in an ill-regulated and absurd way, is sufficiently manifest in the conduct of those—and those not a few—the subject of some of our late animadversions, who would rush upwards, and level all before them, at all hazards.

But while the indication of what is wrong—what is "out of joint"—is so very clear, it is not so with the curative indication, or the method that should be adopted for putting medical science on a more liberal foundation in the metropolis of Great Britain. That the highest class among us, as at present constituted, is too exclusive, and too confined for purposes of utility, seems to be generally admitted in this country, and appears glaringly improper when we see the state of things abroad. The obvious question, then, is, how is this exclusive system to be dealt with, so that its obnoxious parts may be removed, with the least possible detriment to the medical constitution in England? The levellers, we know, would make short work of it, and with their spurious notions of free trade, liberty and equality, &c., would complete the swamping of the profession, which, indeed, has already made no inconsiderable progress. But fortunately the disposal of the matter does not rest in any manner with them; and their immature schemes now require no further notice.

Three recognized licensing boards exist in the metropolis under the present system, and the qualifications required for passing each are of a very different standard and character; yet a great many, or almost all, who pass those boards, fancy themselves justified in taking every kind of practice. The surgeon, however limited his education in *physic* may have been, disdains to be considered as inferior to the best in his treatment of medical cases; the graduate physician, recollecting the interference of the surgeon in medical practice, dispenses with the services of the latter in many cases, where, under other circumstances, he would not fail to call him in; while the general practitioner, by virtue of the extensive powers conferred upon him by the Society of Blackfriars, conceives himself *totus teres atque rotundus*, fit for every thing that comes in his way in the shape of medical, surgical, or pharmaceutical employment. And as there neither is, nor is likely to be, any effectual check for preventing the invasion of each other's province, the majority of those entering the profession, with a view to the carrying on of a profitable trade, choose of course that mode of entrance which entails on them the least possible amount of expense. Hence are we seriously overstocked in the metropolis, with a class of practitioners who were originally destined for the country at large, or more particularly for provincial localities, where men of more expensive education could not be induced to settle. Let it not be supposed that we undervalue the acquirements of general practitioners, for we hold these to be so high, with respect to many of them, that, as we endeavoured to shew in a recent number, means ought to be afforded them of becoming

physicians. But we maintain it to be a manifest impropriety that the metropolis should be in so large a degree dependent on the professional services of those who nominally are inferior, and that the anomaly should so strikingly exist in London, of having a comparatively few only belonging to the first class of practitioners.

The removal of this objectionable state of things will greatly depend on the adoption of more liberality in the arrangements of the College of Physicians, and our views upon this subject have been so often expressed, as scarcely to require a repetition of them at this moment. We would also allude to some considerable modification of the powers enjoyed by the Society of Apothecaries —the establishment of a joint board of Physicians, Surgeons, and Apothecaries, to examine for general practice, and requiring of the candidates a lower scale of qualification than what is at present demanded of the physician or pure surgeon. We fear that after the present race of old practitioners have died off, the expense of medical education will lead to the less opulent parts of the country being either left without professional assistance, or thrown into the hands of quacks. We shall soon see what likelihood there is of a satisfactory adjustment of these points by the labours of the Parliamentary Committee.

ROYAL INSTITUTION.

Friday, Feb. 7, 1834.

The Effects of Changes of Temperature on the going of Timekeepers.

Mr. Dent, in his lecture this evening, gave an interesting account of the contrivances that have been resorted to for the purpose of counteracting the influence of varied temperature on chronometers. Hooke, in 1650, invented the balance spring; but though that valuable invention has been generally adopted ever since, no method of correcting its errors has been found until very recently, except the common one, by the uncertain movement of the regulator in shortening or lengthening the spring. To correct the motions of the balance itself many expedients have been devised by the late Mr. Arnold and others. But Mr. Dent, and a young relative of his, have instituted experiments with different substances for the material of the balance spring; and they find that glass presents almost all the insensibility to change of temperature that can be wished. For example, a chronometer with a *gold* spring, exposed to a range of temperature from 32 to 100 degrees, lost *eight* minutes in the day. One with a *steel* spring, in the same circumstances lost *six* minutes; while, with a *glass* spring, a chronometer exposed to the same influence lost no more than forty seconds. Mr. Dent has accordingly constructed timekeepers with glass springs, and has submitted some of them to the Lords of the Admiralty. They have been tried on board ship, where single guns and broadsides have been fired, while the timekeepers have been uncovered on deck; yet they have experienced not the slightest appreciable concussion, or variation in their rate of going.

As Mr. Dent's lecture was rather short, Dr. Faraday occupied the remainder of the time with some remarks on the expansion and elastic power of metals affected by heat. He particularly noticed the inertness or tendency to set which some of them exhibit while cooling, until their particles are prompted to resume their proper places by producing among them a slight vibration. In the library was exhibited a curious assortment of ancient watches, of all shapes and sizes, some oval-shaped, some octagon, &c.: they were of various dates and countries, and some of them bore marks of exquisite workmanship.

Friday, Feb. 14.

Dr. Faraday delivered, to a very crowded audience, a demonstration of *the principle of Ericson's motive engine.* The machinery of this engine is more simple, or at least far less costly, than that of the steam-engine; but its principle, depending on the difference of the force of two portions of air at different temperatures, is more complicated. Dr. Faraday, however, did all that his unrivalled power of explaining could effect; and, by the aid of experiments, drawings, and sectional models, succeeded, we think, in removing many apparent difficulties. A fifty-horse power engine, on Ericson's principle, is being erected, and reasonable hopes are entertained of its success.

ON BLOOD-BATHS:

An Historical Notice.

By Dr. Hecker.

According to a dark tradition which is incidentally mentioned by Pliny, the ancient kings of Egypt used to bathe in human blood when they were seized with leprosy. A similar story is told of the emperor Constantine; but he seems to have been restrained from employing this revolting remedy in consequence of a vision; and he is said to have been cured by baptism. No great weight can be attached to these ill-authenticated stories; yet it is but too true, that, both in ancient times and in the middle ages, decided healing-virtues for the cure of leprosy were supposed to exist in the blood of innocent children and virgins, and that occasion was given thereby for numberless cruelties. It is needless to refer here to the remoter traces of the belief in the expiatory or healing properties of pure blood; they ramify far, and pass into the most ancient times. Cures of leprous people by the blood of animals, in employing which certain symbolical customs were observed, are mentioned in the books of Moses; and it might not be difficult to discover similar forms among all the nations in the world. During the middle ages the delusion about the healing virtues of human blood, which must have had horrible effects in the great plague of leprosy, received a check from the impression, that only the blood of those children and virgins would prove efficacious, who offered themselves freely and voluntarily for a beloved sufferer. This idea is particularly expressed in the touching story of "Poor Henry," which forms the subject of one of the most beautiful poems of the thirteenth century. A Suabian knight, who sits in the lap of happiness, is seized with the leprosy. In order to escape *civil* death, he seeks through the world for help. The physicians of Montpelier can give him no assistance: he hastens to Salernum. Here one of the Masters makes him acquainted with the apparently hopeless means of cure. Sad at heart, he returns home, and prepares himself to sorrow out the remainder of his days in solitude. A girl of twelve years of age, the daughter of a countryman, conceives a passion for the unfortunate knight, attends him affectionately, and, upon accidentally hearing of the freewill offering, cannot be dissuaded from her resolution to purchase the recovery of her master with her life. Both set out for Salernum, but the catastrophe is not fatal: Henry gets rid of the leprosy, and rewards his generous benefactress with marriage. The story of Amicus and Amelius is another of the same sort, which affords no less ground for concluding, that the superstition of which we speak was scarcely disbelieved in any quarter.

In connexion with this, we should not omit to place the story which is told of Louis XI., that he had a mind to evade his approaching death by the use of the blood of children. Klinger has employed the incident to exalt the horrors of his tremendous version of Faust: and Sprengel, too, has given it credit, and has even spoken of the actual baths having been used. But it is by no means a well-authenticated circumstance, for we cannot discover a trace of it in any truly trustworthy source. The physician, however, to whom the bloody ordinance is charged, is an historical personage: he is no other than the notorious Jacques Cotier.—*Medicinische Zeitung of Berlin.*

MIDDLESEX HOSPITAL.

Fracture of the Os Calcis—Ossific Union.

Sarah Each, æt. 40, whilst cleaning a window-sash, fell from the steps and pitched upon her heel. She was unable to stand up, or even to move the foot or leg of the left side.

She was then brought to the Middlesex Hospital. Upon admission, there was found considerable swelling of the ankle-joint, with excessive pain. A transverse fracture of the os calcis was detected, with separation of about three-fourths of an inch of the fractured portions, so that the end of the little finger might be laid in the fissure. The knee was bent, so as to relax the muscles, and the leg laid upon a pillow on the outside. Leeches and spirit lotions were employed, to subdue the high degree of inflammation which ensued. After this had abated, the two portions of bone were found to be more widely separated, and no effort could bring them into apposition.

Twelve days from the accident, Sir C. Bell ordered a bandage to be applied round the ankle, just above the upper portion of bone, and a pad to be placed behind, to prevent further retraction, as well as to bring the fractured extremities into apposition. At the end of six weeks she was able to leave the bed, and move about the ward on crutches. There was a little inequality felt at the seat of fracture, but perfect ossific union had taken place. In another fortnight the patient left the hos-

pital, complaining only of stiffness in the foot. The inequality observed was disappearing, leaving the bone nearly as perfect as before the fracture.

Umbilical Hernia—Reduction—Recovery.

Eliza Daniels, æt. 48, corpulent, has had twelve children; admitted, 8 A.M., under Sir C. Bell, with umbilical hernia of the size of two fists. The part is tense, red, and shining. It has been protruded eight hours. She sent for a medical man, who, being unable to reduce it, advised her to come to the hospital. When admitted, there was sickness, frequent pulse, dry tongue, and anxious look.

She stated that she had been subject to the complaint for three years, but it never before inconvenienced her in the slightest degree.

After persevering in the employment of the taxis for some time, a gurgling sensation was felt, and, with a little more kneading, the tumor disappeared. A large compress was placed over the umbilicus, and kept in that position by means of a flannel bandage.

An aperient enema was administered two hours after the reduction. This returned without any fæces.

Vespere. — Bowels not open; increased sickness; pulse 120, wiry; lies upon her back, tongue continues dry; pressure on the abdomen creates great pain.

V. S. ad ℥x. This induced fainting. No buff, or cupping. Ol. Ricini, ℥ss. Tr. Opii, ♏vj. statim. Hydrarg. c. Creta, gr. v. Pulv. Opii, gr. ¼, 3tiis horis.

The next day there was increased sickness; no evacuation; tongue more dry; feet cold; urine high-coloured.

Rep. Ol. Ricini statim.

The bowels were copiously evacuated, and in a few days the suspicious symptoms disappeared.

Compound Comminuted Fracture of the Tibia and Fibula—Death.

Anna Shaw, æt. 60, brought to the Middlesex Hospital in a state of intoxication, with compound comminuted fracture of the right tibia and fibula, an inch from the ankle-joint. The bones are completely smashed, and the foot adheres to the leg only by the muscles and integuments. There is considerable hæmorrhage and a a great deal of pain, as denoted by the screams of the patient.

The accident occurred by the wheel of a stage-coach, which passed over the leg.

Mr. Mayo, being surgeon of the week, immediately proposed amputation, as the only chance the woman had of saving her life: but this she strenuously opposed, and said she was satisfied to die with her leg on. Thus the leg was placed in as comfortable a position as possible, and kept cool with ice. There was no hæmorrhage after six hours.

Four days passed over without much alteration: the patient appears inflexible. On the fifth day the countenance was somewhat sunken, but she will take no nourishment. The thigh and leg became swelled, and a fœtid puriform matter was discharged from the wound. On the seventh day, delirium came on; inflammation extending up the leg; tongue dry; pulse small; and in the evening she died.

Upon examination, the lower portions of the tibia and fibula were found broken into twenty pieces. The lower heads of the bones were also fractured in several directions, the ankle-joint being implicated.

PROPHYLACTIC PROPERTY OF BELLADONNA.

At Monastir, in 1829, scarlatina raged, both among our troops and the inhabitants of the towns and villages where we were quartered. The grand vizier, who had expended much time and money on the discipline of this his favourite *corps d'armée*, gladly accepted the proposal of Dr. Oppenheim to try the effects of belladonna. As the troops were generally very young men, and totally unaccustomed to narcotics, the dose he gave was comparatively small: thirty-six grains of the extract of belladonna were mixed up with one pound of the extract of liquorice, and ten grains of this were given morning and evening to each soldier. The success of the experiment far exceeded his most sanguine expectations, for not more than twelve men, out of twelve hundred, sickened after this plan was adopted; of these twelve, six died, and it is to be remarked, that the disease continued unabated among the inhabitants where the soldiers were quartered, after it had ceased among the latter, although they lived in the same houses.—*Edin. Phil. Jour.* and *Monthly Archives of the Medical Sciences.*

CHANGES IN THE BLOOD.

Dr. Wm. Gregory and Mr. Irvine have lately made some experiments to ascertain

the circumstances under which the blood changes in colour, from the dark venous to the florid arterial hue.

Dr. Stevens first shewed, that the venous clot, deprived of its serum by washing, remained dark even when in contact with oxygen; and that the addition of a saline solution caused it immediately to become florid. He stated also, that a strong saline solution would cause this change in an atmosphere so highly charged with carbonic acid as to prove rapidly fatal to animals.

It appeared to the authors necessary to ascertain whether this effect took place in pure carbonic acid, containing no free oxygen, as the atmosphere used by Dr. Stevens most probably did; and they also proposed to extend their observations to other gases, likewise free from oxygen. They accordingly prepared pure nitrogen, hydrogen, and carbonic acid, removing the last traces of oxygen by means of potassium. The water with which the clot was washed, and the saline solution used in the experiments, were deprived of atmospheric air by being boiled and allowed to cool in close vessels. The clot was then introduced into the gases over mercury, and as soon as the strong saline solution came in contact with it, the colour, in all the three gases, changed from black to bright red, and the same change was found to take place in the Torricellian Vacuum. It was obvious, therefore, that a strong saline solution could change the colour of the blood from venous to arterial without the contact of oxygen, or indeed of any gas whatever.

But in blood, the colouring matter is in contact, not with a strong saline solution, but with a very dilute one, viz. the serum. It was necessary, therefore, to see whether the washed clot, placed in contact with serum or a weak solution of salt, in the same gases, would change its colour. On repeating the experiments, both with serum and a solution of salt in water of equal strength to the serum, no change whatever took place, until atmospheric air or oxygen gas was admitted.

The conclusions of Dr. Stevens, therefore, must be somewhat modified. It is true, as he states, that the presence of saline matter is essential to the change of colour: but it is obvious that there is an essential difference between that change, as it occurs in the lungs, where serum is present, and as it appears out of the body, when a strong saline solution is employed. In the former case, oxygen is necessary: in the latter, the change of colour is independent of the presence of any gas whatever. We must, therefore, be cautious how we reason by analogy from the one class of phenomena to the other.—*Ibid.*

PREPARATIONS OF SARSAPARILLA.

J. B. Caventou believes that the most efficacious preparations of sarsaparilla are those obtained in the old way, viz.: a long decoction, after a previous maceration for twenty-four hours. He thinks that the bitter and nauseous principle is quite distinct from the active principle of the plant; and what proves it to be so is, that it is completely separated or destroyed by reiterated decoctions. It is certainly unfortunate that a good chemical analysis of sarsaparilla should still be wanting; and that we should not know to which of its constituent principles we ought to attribute its medicinal virtues; but, if he may judge from some experiments that he made, nothing is easier than to explain how the decoctions of sarsaparilla are deprived of their bitter and nauseous principles: the starch contained in this root plays an active part in this separation: the decoction, in cooling, precipitates a flaky matter of a dirty white colour, and which is the result of the combination of the starch with one of the principles of sarsaparilla. This combination is soluble in hot, and insoluble in cold water. Is it a tanning matter that thus precipitates the starch? He does not think so, since the infusion of sarsaparilla is not disturbed by animal gelatine; it is a principle peculiar to sarsaparilla, and which, combined with the starch, and separated by cold from the decoctions, is entirely foreign to the properties of the plant. Without affirming that it is the bitter principle which is thus separated from the decoctions by the chemical re-action he has just mentioned, he is, however, strongly inclined to think so, because he has succeeded in depriving a watery solution of sarsaparilla of its bitter taste, by beating it up with a certain quantity of starch jelly; he thus artificially obtained what is naturally produced by decoction.—*Lane's Monthly Archives.*

IDIOTCY PRODUCED ARTIFICIALLY IN CHILDREN AND ADULTS.

Although insane persons are not so rare, in Turkey, naturals and idiots are not so unfrequent; and occasionally idiotcy is produced in children artificially, by means of giving the child small doses of narcotics from its very infancy; a practice which, by stupifying the sensorium, prevents the mental development, and ends

by produeing a state of fatuity. This is an extremely curious fact, and I believe that Dr. Oppenheim is the first who has given us authentic information upon the subject. This practice of rendering persons idiotic is the souree of great emolument to some; and Dr. Oppenheim says, that it is earried into effeet, not merely upon children, but upon adults, when it is judged necessary to render them incapable of conducting their affairs, while, at the same time, their removal by death appears, for eertain reasons, impolitic and inexpedient.—*Edinb. Phil. Jour.*

DEATHS IN PARIS IN 1831 & 1832.

In 1831, the number of deaths was 25,996; in 1832, the number was 44,463: but of these, 18,602 died of cholera; and if this number be subtracted from the deaths in 1832, it gives 25,861 as the mortality of that year, or a diminution of 135—which diminution is accounted for by the smaller number of births during the latter year, in consequence of the extraordinary sickness which then prevailed. The general result clearly proving, what we have demonstrated on former occasions with regard to London and other towns in this country—that when they have been visited by cholera, the mortality has been the ordinary number of deaths + those caused by the epidemic.

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Feb. 1834.	THERMOMETER.	BAROMETER.
Thursday . 6	from 26 to 41	29·80 to 29·91
Friday . . 7	29 40	29·97 30·03
Saturday . 8	29 39	30·11 30 20
Sunday . . 9	30 39	30·25 30·28
Monday . . 10	25 40	30·31 30·19
Tuesday . . 11	39 48	30·05 29·90
Wednesday 12	40 47	29·69 29.67

Wind variable, S.W. prevailing.

Except the 6th and morning of the 7th, generally cloudy; rain at times.

Rain fallen, ·3 of an inch.

Thursday . 13	from 32 to 46	29·92 to 30·01
Friday. . . 14	36 43	30·09 30·15
Saturday . 15	39 45	30·09 30·06
Sunday . . 16	29 41	30·14 30·23
Monday . . 17	22 42	30·19 30·13
Tuesday . 18	37 45	30·09 30·00
Wednesday 19	39 50	29 88 29·99

Wind variable, S.W. prevailing.

Except the 16th and 17th, generally cloudy; rain at times on the 14th, and in the evening of the 19th.

Rain fallen, ·175 of an inch.

CHARLES HENRY ADAMS.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Feb.* 18, 1834.

Abscess . .	1	Hæmorrhage .	2
Age and Debility .	27	Hernia . .	1
Apoplexy . .	3	Hooping-Cough .	7
Asthma . .	10	Hydrophobia .	1
Cancer . .	1	Inflammation .	21
Childbirth . .	3	Bowels & Stomach	1
Consumption .	49	Brain . .	5
Constipation of the Bowels . .	1	Lungs and Pleura	5
Convulsions .	25	Insanity . .	1
Croup . . .	3	Liver, diseased .	1
Dentition or Teething	4	Measles . .	4
Diarrhœa . .	2	Miscarriage . .	1
Dropsy . .	9	Mortification .	3
Dropsy on the Brain	10	Paralysis . .	2
Dropsy on the Chest	2	Small-Pox . .	2
Epilepsy . .	1	Spasms . .	1
Erysipelas . .	3	Stricture . .	2
Fever . . .	5	Unknown Causes	2
Fever, Scarlet .	4	Stillborn . .	16
Fever, Typhus .	3		

Decrease of Burials, as compared with the preceding week . . . 47

ELECTION IN THE FRENCH INSTITUTE.

M. ROUX has been elected a member of the Academy of Sciences (subject to the approbation of the King), in the room of his late father-in-law, M. Boyer. His competitors were MM. Breschet, Lisfranc, and Velpeau.

NEW MEDICAL WORK.

Lectures on the Morbid Anatomy, Nature, and Treatment, of Acute and Chronic Diseases. By Dr. Armstrong. 8vo. 16s. boards.

NOTICES.

The person who signs himself AN OLD HAND indulges with wonderful familiarity in insinuations against unendowed medical lecturers throughout Great Britain. He is evidently an Irish or Scoteh College professor, and ought to content himself with what *he* holds independently of merit. At all events he must excuse our omitting his letter, as he has not thought fit to authenticate it.

A CONSTANT READER, in the country, is informed that the Gazette is published in London punctually every Saturday morning at nine o'clock; so that there must be something faulty in the arrangements of his bookseller.

DR. DUNCAN'S letter reached us too late for publication this week.

ERRATUM.—In Dr. Ramsbotham's letter in our last No., page 749, line 44, the "not" is superfluous. The meaning of the passage, however, of *not caring a rush for Wakley and his slanders*, is plain enough.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 1, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XXI.

LABOUR.

Classification.—Almost every systematic writer on the subject of midwifery, since the time of Hippocrates, has adopted some classification of labours, accordant with his own views. The great father of medicine himself was contented with two classes—*natural*, when the head or breech presented; and *preternatural*, when any other part of the child offered itself. Smellie, to this simple arrangement, added a third class—*laborious*; and in some degree changed the meaning of the terms used by Hippocrates. He calls that a natural labour in which uterine action alone accomplishes delivery;—that case laborious, in which manual or instrumental means become necessary;—and that preternatural, when the birth of the trunk precedes that of the head. Baudeloeque also divided labours into three classes—*natural*, comprehending all cases which are terminated by the natural powers, whether the head, breech, or inferior extremities present; *preternatural*, when hæmorrhage, convulsions, or other accidents, occur; and *laborious*, when instruments become neeessary to terminate the delivery. Dewees, after passing a high compliment on Baudelocque, follows his arrangement, but divides instrumental deliveries into *two classes*—the one accomplished by instruments, which do no injury either to the mother or child; the other by cutting instruments, applied either to the fœtal or maternal body. Blundell makes five divisions—*natural*, when the head presents, and the whole labour is terminated in twenty-four hours; *preternatural*, when some other part of the child is the presenting part; labours with *flooding*; *laborious*, when instruments are required; and *complicated* or *anomalous*, when some extraordinary symptoms are superadded. Ashwell makes three—*natural*, *difficult*, and *flooding*. Merriman arranges all labours under two classes only—*eutocia* and *dystocia*; but in the second he introduces fifteen orders, embracing every circumstanee that can in any way render the ease tedious, difficult, or dangerous. Burns multiplies the classes to seven—*natural*, *premature*, *preternatural*, *tedious*, *laborious*, *impracticable*, and *complicated*; all of which terms are sufficiently plain to convey their own meaning. Denman's arrangement, which I consider by far the best of any that has yet been attempted, consists of four classes—

1st, Natural,
2d, Difficult,
3d, Preternatural,
4th, Anomalous or Complex.

This order, so far as the classes are concerned, I shall strictly adhere to; but I shall make some little alteration in the subdivisions.

First class.—The first class, or *natural labour*, admits of no subdivisions; and we may define that case to be such, in which the head of the child presents;—in which not more than twenty-four hours are occupied from the commencement of true uterine action to the termination of the process;—in which nothing extraordinary, nothing untoward, nothing dangerous, nothing perplexing, occurs throughout the whole conduct of the ease. And that labour is deemed natural, in the acceptation of the term which I offer, if any part of the head present, even although it be the forehead

or face itself, provided all the circumstances enumerated concur.

Many authors, indeed, have regarded natural labour as much more contracted in its features. Thus Mauriceau considered it essential that the fœtus should be living; Burns, that it should have arrived at intra-uterine maturity; Baudelocque, that the vertex should present; Merriman, Burns, and Campbell, define it a vertex presentation, under which the face turns into the hollow of the sacrum, before expulsion. There is some difference also in the limit, with regard to time, proposed by different writers: thus Dr. Cooper restricts the period to twelve, and Power to six hours.

Second class.—The second class—*laborious*—is divided into two orders,

A, Lingering.
B, Instrumental.

To constitute this class, also, it is necessary that the head should present; and the first order is defined to be those labours in which, under a head presentation, more than twenty-four hours are occupied from the commencement to the termination of the case; but in which there is no necessity for instrumental interference, and during the progress of which no dangerous symptoms arise—nothing calling for anxiety occurs, except the unusual lapse of time.

The second order of this class—*instrumental*—embraces all cases of head presentation which require to be terminated by instruments. It includes two species—

a, those cases which can be managed by the use of instruments perfectly compatible both with the life of the child and of the mother; as well as the safety and continuity of the mother's structures. Such as are terminated by the forceps or vectis.

b, those in which we are compelled to have recourse to instruments incompatible either with the life of the child, or with the safety and continuity of the mother's structures—labours, indeed, which are completed by cutting instruments.

Of this latter species, again, we have two varieties—

α, some in which the instruments are applied to the fœtal body; as when the case is terminated by the use of the perforator.

β, those in which the mother's structures are divided by the scalpel, or some such instrument, as in the Cæsarean or Sigaultean operations.

Third class.—The third class—*preternatural labours*, or, in common language, *cross births*—includes all cases in which any other part of the child's body than the head presents—the breech, feet, knees, back, belly, sides, shoulders, arms, or hands. In this class we recognize two orders—

A, all those cases in which the lower end of the oval formed by the doubled fœtal body offers itself, viz. the breech; or some part of the inferior extremities, as the feet or the knees.

B, those others in which neither the head, breech, nor any part of the lower extremities, present. Such are transverse presentations, to which, indeed, the phrase *cross births* ought in propriety to be restricted;—breast, abdomen, side, back, shoulder, neck, elbow, and hand presentations.

I shall hereafter tell you, it is of the greatest possible consequence, that we should clearly discriminate—and that early in the labour—between these two orders of preternatural cases, although they are both included in one class; because labours of the first order—where the breech or feet present—will generally be terminated with very little assistance beyond what nature affords: whereas, in order to accomplish delivery, under most transverse presentations we are compelled to perform an operation of considerable difficulty, pain, and danger.

Fourth class.—I have thought it best to admit into the fourth class *complex labours*,—although this is a deviation from Denman's system—all those cases which cannot be referred to one or other of the foregoing divisions—because there are particular symptoms added to each, inducing danger, or rendering them complicated. I shall not adopt the term *anomalous*, employed by Denman, but designate the class *complex*. This class, then, will embrace nine orders, most of them attended with danger, and all with irregularities. The following will embrace them all:—

A. Labours complicated with dangerous hæmorrhage.
B. ——————— convulsions.
C. ——————— rupture of the uterus.
D. ——————— ruptured bladder.
E. ——————— descent of the funis before the head or breech.
F. ——————— descent of one or both hands with the head or breech.
G. ——————— syncope unconnected with uterine floodings.
H. Labours in which monsters are produced.
I. Labours under which two or more children are born.

Now three circumstances must strike you on this enumeration: first, the number of orders jumbled together in one class, without their possessing any affinity

to each other; secondly, that some of them are in the highest degree dangerous, while others must not be considered more than ordinarily so; and, thirdly, that in some of them the danger or irregularity is referrible to the parent, and in others to the child. Thus, in cases of hæmorrhage and convulsions, the cause is to be sought in the system of the mother; but where the funis or hand descends by the side of the head or breech, the irregularity is referrible to the ovum, and the cause is to be sought for in the arrangement of the contents of the uterine cavity. This, then, may be looked upon as a refuse class, in which those cases are all assembled that could not be well comprehended under one or other of the three former. Each of these orders might indeed be considered a separate class, but I think it better to comprehend them under one general head, in order to prevent a multiplication of classes; because in all nosological arrangements such a diversity must be both inconvenient and embarrassing.

STAGES OF LABOUR.

Most writers agree that it is desirable, for the purpose of clearly understanding the process, to divide labours into certain parts or *stages;* but as there is much differenee in the classification adopted by different teachers, so also great diversity has obtained in the number of these stages;—some, as Blundell, preferring two; some three, as Denman, Hamilton, Thatcher, and most modern teachers; others four, as Merriman, Romer of Zurich, Bard of New York; and others, again, five, as Hogbem; —all these stages terminating on the removal of the placenta. I think Denman's arrangement by far the best for practical purposes, and shall therefore consider labours as consisting of three stages: the first terminating with the opening of the os uteri to its full extent, the rupture of the membranes, and the evacuation of the liquor amnii; the second, with the birth of the fœtus; and the third, with the expulsion of the placenta. We might with some shew of reason add a fourth stage, considering that to end with the complete closure of the uterine vessels, and the stoppage of every chance of hæmorrhage: but as this last might perhaps continue nearly throughout the whole puerperal month, it may be as well to follow the more ordinary usage, and to regard labour as divisible into three stages only.

FIRST STAGE.—DILATATION OF THE OS UTERI.

Varieties in the feel of the os uteri.—The first stage, that which depends upon the dilatation of the os uteri from its perfectly close state to that of its full diameter, is generally the longest, the most uncertain in time, and the most tedious both to the attendant and the patient. This stage varies exceedingly in every feature, as, indeed, do all the others. There is a great difference observable in different women, and in the same woman at different labours, in the state of the os uteri soon after the commencement of the process. In some you will find it soft, lax, and yielding,—though not dilated, still dilatable; while in others you will find it hard, firm, rigid, and unyielding, not allowing of being distended at all by the finger any more than this piece of hard leather. Indeed, there are four chief varieties of the os uteri, during the first stage of labour, as to its character. The first is when it is thick, soft, moist, cool, sensible to the touch,—but not painfully so,—having very much the feel of a piece of thick, wet, chamois leather. The second variety is when the os uteri is thick, but has a hard surface; when it is thick, hard, and rigid; perhaps also hot, dry, and tender, and gives a sensation to the finger very much like touching a piece of cartilage. Under the third variety the os uteri is thin, soft, moist, cool, and not painful, its edge feeling like a piece of moist brown paper; and so thin, that through the substance of the cervix the head of the child can be pretty distinctly felt. The fourth is when it is thin also, but hard and rigid, tender or not according to circumstances, having a glazed feel, with its edge surrounding the presenting part of the child, and tightly embracing it, like a piece of whip cord. Under one or other of these varieties we shall always be able to arrange all states of the os uteri soon after the commencement of labour. It may be regarded as most likely to dilate kindly, when it possesses a soft thick feeling, like a piece of wet chamois leather, and is, as it were, chinked. Certainly either of the two soft states gives a better indication of a disposition to dilate, than those which are rigid; and it may be also deemed least inclined to give way, when it is thin and hard, and when the head comes down into the pelvis completely covered with the cervix uteri,—the circular edge resembling whip-cord, or wire.

Varieties in the time occupied in dilatation.—As there is almost every variety in the state of the os uteri at the commencement of labour, so also there is great diversity in the time occupied in its opening; sometimes two or three hours only, at others the same number of days, are consumed in the progress of the first stage; and the os uteri of the same woman will vary exceedingly in this respect in her different labours.

Variations in the height of the os uteri.—We also find the os uteri varying exceedingly in situation at the commencement

of labour; it is sometimes so high, that we can scarcely feel it when the finger is introduced, as in a common examination; and at others it is so low, that it is met with just within the vagina, and the presentation may be detected through the cervix. A more speedy termination may be expected, *cæteris paribus*, when the head has descended somewhat into the cavity of the pelvis, than when the os uteri is felt nearly at the brim; unless, indeed, the cervix uteri should possess the thin, glazed, hard feeling, that I have just described; when we are to anticipate a lingering labour. It is generally to be found about two inches from the vulva, looking backwards towards the middle of the hollow of the sacrum; and it is extremely easy to be discovered by the fore finger of the right hand, or, at any rate, by the two first fingers of the left hand introduced into the vagina.

Relative progress of dilatation.—Again, we observe that the first part of the dilating process usually goes on slower than the after part. Thus, that degree of dilatation under which the organ acquires the diameter of a shilling,—sufficiently large to admit the tips of two fingers,—will perhaps take up a longer period of time than its dilatation from that small size to the full and entire dimension, which readily admits the head of the child to pass through it. This partly arises, perhaps, from the natural disposition in the os uteri to open more readily after it has acquired a certain diameter; but it is owing also in some degree to mechanical action; for when the os uteri has acquired such a size as to admit the membranous bag, or any portion of the child's head to occupy its aperture, the protruded part acts like a wedge, and forcibly distends it. The action, however, is not entirely and purely mechanical, for it depends in a great measure on the principle of vitality.

Dilatation most difficult in first labours.—Generally speaking, the os uteri dilates with more pain and difficulty, and takes a longer time in the process, during first labours than subsequently. This is, however, by no means an universal remark, although we usually observe that, when women have had a number of children, the os uteri dilates with comparative ease. Denman accounts for this facility by remarking—"We may presume that a part which is accustomed to perform an office, or undergo a change, acquires a readier disposition to the office or change, according to the number of times it has performed that office, or undergone that change." I shall hereafter have occasion again to notice this subject, and shall give you a striking instance in which this rule did not hold good.

Time occupied in dilatation indefinite.—It is quite impossible that we can give even a probable guess as to the time which any particular os uteri will require for the process of dilatation; for sometimes an os uteri which has been from the commencement of the labour highly rigid, scarcely shewing the least disposition to open, will suddenly become relaxed, and rapidly distend its circle to its full dimensions; at others, while soft and flaccid, the pains will altogether subside without any apparent cause; the process of dilatation will be suspended, and the labour will remain stationary for hours, without in the least progressing.

Pain in the first stage borne with difficulty.—The pain experienced during the first stage, although not so intense or acute as in the second, is still more difficult to bear; and is also borne generally with less fortitude. It is, as I stated before, of a different kind from the pains of expulsion; it is a feeling as if some inward part were being torn, or rent asunder. But it is not only perhaps in consequence of the peculiar sensations experienced, that the patient does not endure these "grinding" pains with so much resignation as those of a more "forcing" character; but also from the knowledge which she has gained, either by a previous labour, or in conversation with her friends, that so long as the "grinding" pains continue, there is no chance of a speedy release; but that, as soon as the "forcing" pains come on, the labour may speedily be brought to a close; and *every next*, she thinks, may terminate her sufferings. As soon as the pains become changed in their character, hope is infused, fresh spirits are instilled, and thus the patient's powers are sustained. It is principally, perhaps, owing to this cause that women are more irritable during the first, than in the second stage; although the pains of expulsion are more violent, and attended with more of actual painful sensation.

Intermission of the pain.—If the labour be progressing regularly, the pain subsides and again returns; thus intermissions alternate with paroxysms of suffering; and we shall frequently find, if the patient be in other respects well, and in good spirits, that she will fall into a dose and obtain a refreshing slumber during the intervals of uterine action; each pain, when it returns, awakening her from the delicious state of oblivion and repose, to a fearful consciousness of the trials she has to undergo.

Rupture of the membranes.—With each pain the membranes are more or less protruded through the os uteri, so that they become tense, and the circle of the dilated mouth is drawn tightly around them. In the interval of pain, when the uterus exerts no pressure from above, the mem-

branes retreat, become flaccid, and are scarcely to be felt; and as there is little or no water then intervening between the finger and body of the child, its presenting part can usually be distinctly discerned. Such a state of alternate protrusion and retrocession of a part of the membranous cyst continues an uncertain time; when under some one of these painful contractions the membranes will burst, the liquor amnii will be evacuated, and the head of the child will come to bear, with each paroxysm, against the internal surface of the os and cervix uteri. On the breaking of the membranes the first stage of labour has terminated.

Variations in the period when the membranes rupture.—I have thus described the progress of a labour until the rupture of the membranes, taking it for granted that the liquor amnii will not be evacuated until the os uteri is dilated to nearly its full extent; but these two occurrences,—the full dilatation of the os uteri, and the rupture of the membranous cyst,—are not always found in practice to correspond with regard to time; for sometimes the membranes break before the os uteri is dilated even to the size of a shilling; while at others they protrude considerably through that organ; the head of the child having descended so as to occupy the cavity of the pelvis, and the os uteri having been widely open for some considerable time. Generally the membranes burst when the mouth of the womb has become dilated to a size sufficient to admit the hand; and we may presume that where such a degree of dilatation exists, the next pain or two will expel the head entirely through its orifice.

According then to the rigidity of the membranes, and the yielding state of the os uteri, will be the time occupied previously to their rupture, and the discharge of the liquor amnii. When the os uteri is lax, and the membranous bag tough, the time will generally be long before it bursts; but when it is rigid, and the membranes thin and tender, they generally break early. The period at which the membranes rupture, therefore, will not only depend upon their own toughness or tenuity, but it will also be regulated by the pressure which the edge of the os uteri exerts on them while they are protruded through it. The more lax is the os uteri, the less is the compression on the extruded portion of the cyst, because the os uteri then distends to the power operating from within; but if it be rigid, the pressure is great; for then the inner margin closely and strongly embraces the tense membranes all around, producing by its very resistance a circular groove; and thus disposing them to premature laceration.

Necessity of preserving the membranous bag entire.—It is highly desirable in practice to preserve the membranous bag entire as long as possible; or, at least, until it has performed the whole of the office destined for it by nature;—namely, the dilatation of the os uteri, the vagina, and somewhat of the external parts. When the membranes appear externally to the vulva, indeed, we may then suppose that they have done all the good that can be expected from them; that their remaining entire may possibly be retarding the labour; and we may in that case venture to rupture them, provided the head present. It is one of the first axioms to be learned in midwifery, not officiously or unnecessarily to break the membranes, but to preserve them entire as long as we can; or, at least, until they have performed the whole of their intended duty.

Immediate cause of the opening of the os uteri.—The os uteri is supposed by some physiologists to be drawn open by the longitudinal fibres of the womb contracting, and by that contraction dilating its orifice. They presume that these fibres are inserted into the os uteri as into a tendon, and that their action tends to draw the edges asunder. By others it is supposed that the os uteri possesses an elasticity similar to caoutchouc, and to that cause they refer its dilatation. Others attribute it entirely to the membranous bag acting as a wedge from the very commencement. I believe it may be explained partly by each of these causes, or all acting in co-operation. Certainly the os uteri does possess a peculiar elasticity, which inclines it to give way;—the membranes form a powerful wedge, which dilate it in some degree;—and it is possible also that the longitudinal fibres of the uterus being inserted near its circular mouth, may to some extent draw its edges asunder: but I am inclined to attribute the dilatation principally to a law of nature, which disposes it to open when the uterine fibres are disposed to contract; because we find that when the membranes break at the beginning of the process, before the os uteri is dilated even so much as to admit the tip of the finger,—when no part of the ovum can be received into the aperture of the os uteri,—still that organ will dilate; so that the cause cannot be at any rate entirely mechanical.

SECOND STAGE.—PASSAGE OF THE FŒTUS THROUGH THE PELVIS.

From the foregoing remarks we gather that after an uncertain time, the os uteri becomes fully dilated; the membranes burst; the liquor amnii is evacuated, generally in a full stream; and the second stage of labour commences.

Modes in which the vertex presents.—The passage of the head through the brim of the pelvis forms the first part of the second stage. It is probable, indeed, that the head may have descended considerably into the cavity before the "waters break;" but it is also possible that it may scarcely have engaged itself even in the brim, when this crisis in the process occurs. There are eight different modes in which the head may present;—the vertex being the dependent part. We have already applied the term *vertex* to that spot of the head placed rather anterior to the hinder fontanelle, from which the hair diverges as from a centre. That the vertex should present—and it is by far the most frequent presentation, not only of the cranium, but also of any portion of the fœtal body—is most wisely ordained by nature, because the head, when this part is placed downwards, will pass through an aperture of much less dimensions than if any other portion of the cranium presented. Nearly an inch of less space is required in one of the diameters when the vertex depends, than when the brow, face, or any other part, offers itself; as you may observe in the difference of size between these two apertures, cut for the purpose of illustrating this position: thus, then, the head is usually placed in such a position at the commencement of labour as to require the least possible space in consideration of its size and form. If, then, the vertex be the presenting part, there are eight different modes under which the head may attempt the passage.

The first is, with the face inclining to the right ilium; the right ear being behind the symphysis pubis; the left ear below the promontory of the sacrum; and the occiput inclined to the left ilium. The second is the reverse of this position; the face inclines to the left ilium; the occiput to the right ilium; the right ear lies below the promontory of the sacrum; the left ear behind the symphysis pubis. The third mode is when the head is placed diagonally, the face looking to the right sacro-iliac synchondrosis; the right ear to the right groin; the left ear to the left sacro-iliac synchondrosis; and the occiput behind the left groin. The fourth position is the reverse of this again, where the face is placed against the left sacro-iliac synchondrosis; the occiput behind the right groin; the right ear against the right sacro-iliac synchondrosis: and the left ear behind the left groin. The fifth position is where the face is looking towards the right groin; the occiput to the left sacro-iliac synchondrosis; the right ear to the left groin; and the left ear to the right sacro-iliac synchondrosis. The sixth position is where this is reversed, the face looking towards the left groin; the occiput to the right sacro-iliac synchondrosis; the right ear to the left sacro-iliac synchondrosis; and the left ear to the right groin. The seventh is where the head attempts the passage with the face immediately against the promontory of the sacrum; the right ear to the right ilium; the left ear to the left ilium; and the occiput behind the symphysis pubis. And the eighth and last, where this position is reversed, the occiput being exactly against the promontory of the sacrum; the face behind the symphysis pubis; the right ear to the left ilium; the left ear to the right ilium.

These are all the modifications of vertex presentations which it is worth while to enumerate, and I dare say you think they are sufficiently numerous; but to distinguish them is important, not for the mere object of theoretical disquisition, but in regard also to the conduct of the case. The French, indeed, have exercised much ingenuity in multiplying the fœtal presentations, and Mad. Boivin has given nearly 120 delineations of the different positions of the fœtus, and the modes in which it is expelled, or may be extracted under the various presentations.

Comparative frequency of the various modes of vertex presentation.—Of the presentations I have mentioned, the first four are by far the most frequent, and under them the labour is the most easily accomplished;—that is, when the face either looks directly to one ilium or the opposite; or diagonally to one sacro-iliac synchondrosis or to the other. Of these four positions I do not know which occurs most frequently. I am inclined to think, from cases where I have had an opportunity of learning particularly the situation of the head before it makes its turn,—under the application of the forceps for instance,—that the face looks more frequently to the left side than to the right; but I do not know that other practical men have made the same observation; and the preponderance of this situation in the cases I have met with might only be accidental. Some writers, indeed, as Campbell and Ashwell, tell us, that in the greater number of labours the fœtus enters the pelvis with the face to the right side. Under either of these positions, the natural inclination of the head is to descend into the pelvic cavity in the same direction in which it cleared the brim, until it reaches the outlet, and then to turn with the face into the hollow of the sacrum, and the occiput under the arch of the pubes, the face being expelled, sweeping the sacrum and perineum.

Of the next four presentations the fifth and sixth are the most frequent, viz. where the face is looking diagonally to one or other groin, and the occiput to one or other sacro-iliac synchondrosis. These are not very frequent cases, but they are occasion-

ally met with, and the head is seldom so speedily expelled as in either of the first four. In these situations, the natural inclination of the head is to pass down diagonally till it comes to the outlet of the pelvis, and then to turn with the face under the arch of the pubes and the occiput into the hollow of the sacrum. You will see how much more room is required in this position, and how much less easily the head adapts itself to the passage; for this head [presenting it] passes most easily into the pelvis which I hold in my hand,—whose capacity, indeed, is larger than ordinary,—when the face is thrown into the hollow of the sacrum; but if the face be turned forwards, behind the symphysis pubis, you see it does not accommodate itself to the pelvis;—that in this dry state it cannot be thrust through even by force;—and in the recent state, it would require to be compressed to a much greater extent than if the face naturally inclined backwards: consequently, in the same degree, would the labour be rendered tedious or difficult. These irregular positions of the head are frequent causes for the necessity of instrumental interference.

The seventh and eighth cases of vertex presentations—where the face attempts the passage, being placed directly against the promontory of the sacrum, or above the symphysis pubis—are the most infrequent of all vertex presentations; they are so rare, that some practitioners of considerable experience tell us they never met with them. Dr. Naegel, indeed, of Heidelberg, in his essay on the Mechanism of Parturition, denies the existence of such a case; and Dr. Campbell, of Edinburgh, who within the last few weeks has published a System of Midwifery, which is a valuable acquisition to our stock of obstetrical works, doubts the possibility of its occurrence.

As in the early part of the observations I have laid before you, we learned that the fœtal cranium, from occiput to forehead, measures four inches and a half, while the sacro-pubal diameter of the pelvis at the brim possesses only four inches of clear available space; it is evident that, although the head might present in the seventh or eighth position, it cannot enter the pelvis in either of those directions. Before, then, it can engage in the superior strait, it is compelled to turn, with the face somewhat towards the right or the left side. I have certainly never been called upon to deliver by instruments when the head occupied the unfortunate situation we are discussing; but I have known it to obtain at the commencement of labour; and I have traced the head make a turn with the face to one or other side, being forced into that position, by the strength of the uterine contractions, in an analogous manner to the turn effected in all natural labours when the head is on the point of being expelled. I think, therefore, the assertion, that such a presentation never occurs, or is impossible, far too general and sweeping.

OBSERVATIONS ON THE

CROWING INSPIRATION OF CHILDREN,

And its Connexion with a Morbid Condition of the Thoracic or Cervical Absorbent Glands.

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[Concluded from page 795.]

A most important part of my subject remains for consideration: this is the treatment of the disease, for which, as it is produced by various causes, it is impossible to devise any catholic remedy of universal application; and the difficulty of prescribing appropriate means is much enhanced by the frequency with which enlargement of lymphatic glands, even when produced by a local cause, is connected with a lurking constitutional taint. After trial of various measures of relief, the great practical conclusion at which I have arrived is, that whilst violent remedies of all kinds, especially profuse blood-lettings, large doses of calomel, or other mercurials, and violent doses of drastic purgatives, are worse than useless, such remedies alone as will uphold the constitutional powers without producing general excitement, afford the best chance of curing the patient.

A somewhat generous diet, varying according to the age of the child, but easy of digestion, and unirritating, should therefore be allowed. And amongst the medicinal agents, mineral acids, some metallic preparations, as the milder forms of iron, zinc, or copper, and occasionally, in very enfeebled subjects, quinine, or other vegetable bitters, may be employed with advantage.

As cold is well known to have considerable influence in enlarging these glands, the protection of these children from sudden vicissitudes of temperature constitutes a very important feature in their management. The warmth, therefore, of their room should be moderate,

equally remote from the excessive heat which excites, and from the extreme cold which is so apt to engender catarrhs and other inflammatory ailments, and to drive the blood from the surface. And here I cannot refrain from noticing the injudicious arrangement of even the very moderate accommodation which houses in large towns afford for children. Nothing can be worse in general, both in construction and situation, than very many of the nurseries, even amongst the more respectable classes of society: they are often in the upper part of the house, in the attics as they are called, almost immediately under the roof—where the children are scorched with heat in the summer, starved with cold in the winter. It will materially aid the beneficial effect of remedies, if, sacrificing convenience to the health of these little patients, they shall be removed from this exalted situation, and allowed to occupy a lower apartment, not so subject to the skyey influences of a notoriously uncertain and unequal climate. Warm clothing also is essential. The delicate skins of these children are peculiarly sensitive to the impressions of cold, and require generally the protection of flannel, in which they should be clothed from the neck to the wrists, the legs being also encased in woollen stockings.

In damp weather and situations, the symptoms of this disease are commonly and considerably aggravated. It should therefore be a peremptory injunction to the friends, to confine children labouring under this malady to the house during fogs or rain, and when the wind is bleak, as well as dry; but in temperate and dry weather they are not to be debarred from exercise in the open air. Nor need we be deterred by the mucous rattle so frequently observed in this disease, which will not be increased by moderate exposure. There is in these cases no inflammation to be increased, or irritable membrane to be excited, by the access of an air, cooler than that of the house, to the air tubes: there is probably not even an increase of secretion. The sound of mucus is simply the result of accumulation from defective power of the expelling apparatus, which, we have seen, is at least partially paralysed, and over which weather has little other influence than as it increases or diminishes the bulk of the absorbent glands.

When the circulation is languid, as is proved by the feebleness of pulse, cold extremities, the appearance of chill, or the actual occurrence of chilblains, and torpid bowels, the warm-bath, succeeded by friction with a coarse towel, will be found a valuable auxiliary. Some, with a view to increase the strength, and, by "the reaction," as it has been technically called, to give vigour and increased activity to the circulation in the extremities and upon the surface, have suggested dipping in the cold-bath. But fear or sudden fright are amongst the most frequent causes of a paroxysm; and even the impression of cold upon the skin is injurious. We have already seen, that in one case at least, the first attack was brought on with "a gasp," by the application suddenly of cold water to the head. This is abundantly intelligible. Even many in health often experience an embarrassment of breathing, with sense of oppression, from constriction of the glottis, upon plunging into cold water; and this constriction is of the essence of this malady. Whatever, therefore, has a tendency to excite, to aggravate, or reproduce this constriction, cannot fail to be detrimental in this ailment.

In all cases, moreover, of this crowing disease, mild but efficient aperients are useful. Upon this point Dr. Merriman speaks in a tone of confidence, which proves his conviction of the truth of this gratifying announcement. "If timely attended to," says my estimable friend, "the complaint commonly yields to *daily* aperients, so as to produce at least two copious motions; and continued doses of soda, or a strong infusion of burnt sponge, with proper attention to diet and regimen." Although my own experience does not warrant my speaking with the same certainty of the almost universal efficacy of these remedies, employed to the exclusion of others, yet it is impossible not to assent most cordially to the propriety of enforcing the employment of aperients. It has already been shewn, that whatever interferes with the respiratory function will produce and increase the frequency of the paroxysm; and a distended alimentary canal is obviously an impediment to breathing. It is now some two years since I was sent for to an adult, who had no symptom of disease of structure or of function in the respiratory system, on account of ob-

stinate obstruction in his bowels. I found this man, of robust health, with the waistband of his breeches and his waistcoat unbuttoned, that room might be made for the enormous distention of his bowels, and that all pressure might be removed from his chest. He was unable to lie down on account of breathlessness in that posture; his breathing was short and very laborious; his lips swollen, and blue; his countenance with a livid tinge, and his pulse irregular. In fact, his appearance was that of a patient dying of hydrothorax. He had been plied with reiterated doses of active purges, in a fluid and solid form, and stimulant clysters, but without effect. I directed for him two drops of the croton oil, which purged him furiously in the course of the night; and though greatly enfeebled, he was unable to resist the temptation of walking to my house on the following day from Lisson Grove, a distance of at least two miles, to express his gratitude for the relief he had experienced. This was a pure and unmixed case of urgent dyspnœa, induced by abdominal distention, and cured by its removal. With still more certainty will injurious effects arise from the same cause, where there is already disease, structural or functional, of the respiratory apparatus. Besides, it has been already stated, that in many cases the digestive and propelling powers of the stomach, more particularly at its large extremity, are impaired by the par vagum being also implicated in the effects of the compression, which is producing its principal influence upon the recurrent nerve. It has been seen, too, as a consequence of this, that milk and potatoe are constantly passing through the alimentary canal, the former white and curdled, the latter unaltered in form. If such undigested aliment be allowed to linger in its passage through the bowels, it is well known that serious results are apt to follow. The mucous membrane will be irritated by this unnatural stimulus: the child's remittent fever may be superadded, therefore, to the original disease. Slimy motions, sometimes streaked with blood, will be observed; the mesenteric glands, worried by the extension of irritation through the lacteals, will become enlarged; and the child, consequently, the victim of marasmus. I cannot, however, too strongly deprecate, in any stage of this progressive disturbance of the digestive organs, the employment of those herculean doses of calomel which it is the pride and boast of some practitioners to employ. They only aggravate the irritation of the mucous membrane: they have a tendency to add to the excitement, till that which was simple irritation advances to inflammation, and its consequence upon mucous surfaces—ulceration, which dissection will too frequently give us an opportunity of verifying. At all events, griping will be, by the agency of this potential remedy, next to inevitably produced, and the fits of threatened suffocation will consequently be at once more violent and more frequent; for few causes are so apt to renew these attacks as vehement crying, whether from pain or from passion.

Cough, as a concomitant or consequence of this disease, is of very frequent occurrence; and the terms in which parents and friends describe it, sufficiently mark its severity. It is represented by them as "like croup," or "hooping-cough;" as "coming in fits, enough to choke the child;" as "suffocating;" as "strangling;"—and it has even been mistaken by very competent authorities for hooping-cough. This cough, like all other circumstances that have a tendency to hurry or embarrass respiration, produces a recurrence of the paroxysms of breathlessness and crowing; and this more especially when the bronchial glands are affected. It is therefore an object of moment to tranquillize this cough, which, at the least, will save parts, which are enlarged by disease, from injurious shaking. For this purpose, such narcotics should be selected as neither disturb the head nor confine the bowels. The conium is one of those which have been much and deservedly commended in all cases of spasmodic cough, including hooping-cough; and I have not unfrequently employed it with advantage. Similar in virtue, but of minor efficacy, are the extract of the lettuce and of the potatoe, as recommended by Dr. Latham, sen.; and somewhat more powerful than these is the henbane. But the hop, as combining a sedative and tonic influence, is the remedy of this class which, upon the whole, in these cases, I prefer. Friction, also, with embrocations combining stimulant and sedative properties, will in

very young children contribute largely to quiet not only the cough, but the whole nervous system. I have seen some smile incredulously at the proposal thus to tranquillize an irritable respiratory and nervous system by the external application of opium. But it is familiarly known in the West Indies, that rubbing the belly with castor oil will purge; and other remedies have been occasionally used in the same way. I may, however, upon the subject of this mode of applying opium externally, mention one instance, which is conclusive as to its powers. The child of a respectable tradesman in South Audley-street had an irritable cough, which much resembled, in every thing but the hoop, pertussis. I directed for it a simple saline mixture with an antimonial, and an embrocation of linimentum ammoniæ, with tincture of opium, in the proportion of two drachms of the latter to ten of the former. On the following morning, a general practitioner in the neighbourhood called to tell me that he had been summoned to this child, whom he had found in a state of torpor, almost amounting to coma, which he was satisfied could arise only from pressure upon the brain; and he desired my sanction for the employment of very active remedies. I inquired as to the remedies I had prescribed, when he gave me a most accurate account of the mixture, for the accuracy of compounding which he assured me he could answer, as he had made it up himself. He, however, omitted all mention of the embrocation, attaching little importance to it, or from its having escaped his recollection. Upon inquiring if the embrocation had been employed, I learned, that after the warm-bath, the chest and spine had been well rubbed with it. I saw the child soon after, and found it evidently labouring under the influence of opium. It had been asleep, without intermission, for sixteen hours, and during the next sixteen hours it could only be aroused twice to take the breast, and that very imperfectly. When the child recovered from the influence of this very powerful drug, the cough had nearly subsided. This is indeed an excessive effect, such as I have not again witnessed; but, in a less degree, I have repeatedly seen a similar influence from the same proportion either of the compound camphor, or the ammoniated liniments, and of laudanum; and I have no hesitation, therefore, in recommending the employment of the remedy.

As to the internal administration of opium in these cases, I have little experience either of its virtues or its vices. I have rarely employed it. Mr. North has suggested—rather, however, in the form of inquiry than a direct commendation—whether the black drop, the sedative liquor of opium, or the acetate of morphine, might not deserve a trial, when, by the dread of cerebral excitement, we are deterred from the employment of the more common forms of opium. Nothing can be more clearly conceived, or more forcibly expressed, than the restrictions with respect to its use in cases of convulsions, of the nature of which he considered this disease to partake, laid down by Dr. Clarke; and as they embody my own sentiments upon the subject, I cannot refrain from quoting them. "It requires the greatest consideration, and the exercise of great circumspection, to determine when and in what quantity opium may with propriety be exhibited in convulsions. It may fairly, however, be laid down as an axiom, that it should never be employed, on any account, until it is clearly ascertained that no danger is likely to arise from pressure on the brain—that there is not any existing inflammation of that organ; and never until the bowels have been completely unloaded, lest the stupor, arising from a compressed brain, should be imputed to opium; and the time when alone relief could have been given in inflammation of the brain, should be allowed to pass by, never to be recalled.

"When the medical attendant has reason to believe that no danger is to be apprehended from any of these circumstances, opium, in small doses, cautiously repeated, may be administered with advantage; and it will sometimes diminish pain, by lessening the sensibility and irritability of the patient. Great care must, however, be taken during the use of it, to keep the intestinal canal free*."

The rest of the treatment will be materially modified by the cause which has produced the glandular enlargement; and amongst the most frequent is "painful dentition," or possibly "anormal

* Commentaries on the Diseases of Children, p. 108.

development of the teeth." Hence it is that Mr. North speaks so strongly in favour of frequent and effectual lancing of the gums in these cases; and my own experience has enabled me abundantly to verify this opinion of the advantage to be derived from this remedy. I also quite agree with him, that the effect of this remedial agent is not instantaneous, but requires some time for the exertion of its complete influence; for "it seldom happens that the symptoms subside until the appearance of the teeth. I do not mean to assert that they vanish instantaneously, as if by magic, the moment a single tooth starts through the gum: they pass off gradually *." This is not, however, the precise effect which should be expected, if the phenomena depended exclusively upon irritation of the gum, or the membrane of the tooth, extending itself to the nervous system generally, and the nerves of the closing muscles of the glottis in particular. In the spasms arising from structural disease of a nervous cord—"amota causa, tollitur effectus"—the effect is at least rapid, if not instantaneous.

When the glands are enlarged, from eruptions upon the face or that part of the scalp from which the lymphatics proceed towards the glandulæ concatenatæ in the neck, the object, as in two cases successfully treated by such means, should be to sooth and cure these eruptions, by poultices, fomentations, mild or very slightly stimulant unguents, and gentle aperients,—not omitting, if these occur about the time of teething, also to lance effectually the gums and enveloping membrane of the teeth which may be advancing.

But, as Cruikshank has truly observed, "These glands not only enlarge from particular affections of the teeth and jaws, and of the integuments on the outside of the head, but from affections of the brain and its coverings *." To the state of the cerebral circulation, therefore, should our attention be also directed; for, although my experience warrants me in affirming, that the connexion is infinitely more rare than is commonly imagined, yet, beyond all question, it occasionally exists. The disease within the cranium, however, will in these cases manifest itself by the same symptoms which lead to its recognition in other instances unconnected with the sonorous inspiration. The crowing presents us with no additional evidence of head affection, and may in such cases be disregarded. But thus much of importance may be conceded to this symptom,—that where we can trace no other cause for its occurrence, where there is no "painful dentition," no inflammation or eruption upon the face or scalp, no particular exposure to cold, or strumous taint, our inquiries should be directed to the state of the circulation within the head; and if we are convinced, or strongly suspect, that congestion or excitement exists, we must have recourse, with activity and energy, to the employment of those means which are calculated to relieve it.

It does not fall within the scope of my present inquiry to canvass minutely, or even to enumerate, the characteristic symptoms of such pathological condition within the cranium, or even to point out the appropriate treatment. This has already been done to our hands. The symptoms have been well sketched by the master mind of the late Dr. John Clarke; and what was deficient in his account of the treatment, has been well supplied by Mr. North.

But there is one other cause of enlargement of both the cervical and thoracic absorbent glands, which I must not omit to notice. This is a lurking strumous taint, which is in this country, and amongst our northern neighbours, of very frequent operation, and often wholly unconnected with dentition. Notwithstanding the vast variety of means which have been suggested for the cure of this constitutional malady, it still remains "*inter opprobria medicorum.*" I do not pretend to provide a cure for a disease which has hitherto yielded to none of the means suggested. All agree, however, that mild and nutritious diet, proportioned to the powers of digestion; such moderate aperients as will carry the refuse of the food a little more quickly through the alimentary canal than in its torpid state in this disease it would otherwise pass; and the mildest tonics, as bark or bitters, or, where these are too stimulant, sarsaparilla, with gentle alteratives, offer the best chance of relief.

But other remedies have been suggested as useful in this disease, without any scrutiny as to their mode of opera-

* North, p. 261.
† On the Absorbent System, p. 131.

tion, or suspicion that it was connected either with scrofulous tendency, or even glandular enlargement, but as the result of downright empirical experience.—Amongst these stand conspicuously, among the means recommended by Dr. Merriman, "continued doses of soda, or a strong infusion of burnt sponge*;" and, in a private communication with which I have been favoured by my friend upon the subject, he says, "Since I re-edited Underwood, my experience has, upon the whole, confirmed me in the opinion, that alkalies are useful remedies in the treatment of this complaint; but I now use sedatives, conium, hyosciamus, and opium, after opening the bowels more freely than formerly, unless there be evidence of determination of blood to the head; and I often give small doses of ipecacuan." These observations of Dr. Merriman, especially with respect to soda and burnt sponge, while they coincide greatly with the practical views which I have been led to take upon the subject, afford also collateral evidence of the frequent connexion of this crowing with glandular enlargement, for which such remedies are confessedly useful, and frequently employed.

In this catalogue of remedies, brief as it is, the first in order, as perhaps in importance, is the use of "daily aperients, so as to produce at least two copious motions." I have already taken occasion to advocate the propriety of this practice, upon the simple and single ground, that distention of the abdominal canal, by impeding the respiratory function, increases the frequency and severity of the attacks of this disease. I have now to notice it in its other relations. In this, as in all diseases where any portion of the nervous system is particularly implicated, it is necessary to remove all sources of irritation. With these, the intestinal canal, when clogged, abounds; and to this the attention of a judicious practitioner cannot fail to be duly directed. Indeed, in the present time, when it is the prevailing fashion to refer so many and diversified diseases to digestive disorder, there is little danger of its escaping notice. All practitioners and writers accordingly agree as to the utility of purgative medicines in this disease, although they may vary in the principle by which their practice is guided upon these occasions. So some purge to relieve the head, which they believe to be always the peccant organ, and for this purpose they employ gigantic doses of calomel, "worked off" by saline purgatives, to establish the larger drain from the vascular system. Others use enormous and reiterated doses of the same drug, (potent both for good and for evil,) without "working off," that it may excite irritation along the whole course of a lengthened canal, and thus not only drain the blood-vessels, but act as a "counter-irritant." Others again use the calomel, in the hope that it may exercise its assumed anti-inflammatory or anti-febrile influence, or produce some "specific," but curative effect, upon a hydrocephalic disposition; the term *specific* being here, as in all cases when it is employed in medical records or reasoning, to imply an impression upon the disease not in proportion to any sensible operation upon the system at large, (for ptyalism is not considered essential,) or upon any class of organs in particular. But the object of the most judicious practitioners appears now to be, to obviate accumulation and consequent distention, or to prevent the half-digested matters from lingering in and becoming in the alimentary canal, a cause of excitement to the mucus lining, or to remove or correct acrid secretions, where they exist; accordingly, the mildest aperients, provided they are sufficient for the attainment of these objects, are more commonly selected. Saline purgatives are not commonly desirable, as they not only clear the canal of its contents, but establish a weakening drain upon the constitution. Resinous cathartics, and other purgatives denominated drastic, are equally objectionable, on account of their griping influence, which will increase the frequency of the attacks, by the fretfulness, with crying, which it induces. Rhubarb, either in substance or infusion, is amongst the most useful of the aperients which we can employ, and it has the advantage of admitting combination with other medicinal agents which circumstances may demand:—so, if the secretions are disordered, mild alterative doses of mercurials, with "small doses of ipecacuan," may be added; if acidity, with very torpid bowels, magnesia constitutes a valuable addition; and if from indigestion, which is very common in this disease, more

* Note in Underwood on the diseases of Children, Ed. 8th, 1827, p. 139.

particularly when the par vagum has been subject to injurious compression, the canal be largely distended with flatus,—alkalies, with "volatiles and fœtids," may be employed with advantage. It is evident, however, that Dr. Merriman considers soda to have some other property upon which its beneficial agency in this disease depends, though, from the obscurity in which the pathology of this disease has hitherto been involved, he had necessarily difficulty in explaining its mode of operation. His testimony, however, to its utility in this disease affords something like collateral and corroborative evidence of the accuracy of the views which I have been disposed to entertain as to the essential pathological condition in the great majority of instances of this malady; seeing that soda has long been a favourite remedy in morbid affections of the absorbent system, especially those connected with a strumous habit*. The same observation applies to the employment of the "strong infusion of burnt sponge," which was long an empirical remedy in scrofulous enlargement of the lymphatic glands, even when the proximate principle upon which its efficacy depends was yet wholly unknown to the profession. But, as it has been now ascertained that the beneficial results from the use of sponge are to be ascribed to the iodine which it contains, it will be better to employ this essential ingredient in its composition. It may be employed both externally and internally. The neck and upper part of the sternum may be rubbed twice daily with any simple unguent containing about an eighth of the hydriodate of potass, whilst, for administration internally, the liq. hydriodatis potassæ may be combined with liquor potassæ, and any other remedies which may be thought advantageous.

Many have thought, and still think, too lightly of the influence of this remedy: it has been considered by some as powerless alike for good or for evil. To counteract this too prevailing impression, was the principal object of an interesting little work upon iodine, published some years since by my intelligent friend, Dr. Gairdner. He has had very numerous opportunities, both in this country and in those districts upon the Continent where the frequency of the occurrence of goitre leads to the extensive employment of this remedy, to witness its influence; and he has borne ample testimony, not only to its efficacy in many cases, but to the injurious effects which it is capable of producing in some constitutions, when given in too large doses, or when too long continued.

These are the pharmaceutical remedies from which I have seen the greatest advantage; but there are others which have been recommended upon high authority, and which may therefore be tried in combination or succession with those I have enumerated. Dr. Underwood, looking upon this affection, when accompanied with other symptoms, merely as an "extraordinary spasm," says, he has succeeded in removing it in every instance, by treating it as chronical croup, with assafœtida, oleum succini, tinctura fuliginis, musk, or cicuta, according to circumstances. Of the last of these remedies, I have already spoken in terms of commendation; but I have little confidence in the others enumerated, unless in cases where the lungs are additionally embarrassed by flatulent collections in the stomach and bowels. There such remedies may be useful.

The means suggested by Mr. North, in those cases where there is no evidence of vascular turgescence or excitement within the cranium, consist also of a few simple, but efficient remedies; as lancing the gums, upon which, with much propriety, he lays great stress,—active purges of calomel and jalap, or tincture of senna, with tincture of jalap; and if hepatic derangement, nightly doses of one grain of calomel, in preference to the hydrargyrum cum creta. Where the "*spasms*" (?) are violent, he adds friction with a liniment combining stimulant and sedative properties, and, as already stated, proposes for consideration whether Battley's sedative liquor of opium, black drop, or acetate of morphine, might not be given with advantage. I am happy to find that my experience coincides as to the general plan of treatment recommended by Mr. North, for whose authority I have great respect, although there is some variation as to the precise agents which we respectively employ to compass the ends we have in view,—and that there is so little variation in our general views upon the subject of true convulsions. He has seen the preparations in my pos-

* Kirkland.

session, and has expressed great interest upon a subject which he much encouraged me to elucidate.

In addition to the remedies which I have noticed, I must not omit strenuously to recommend change of air. This is an important measure to all, but especially to the metropolitan child, in whom the impure air of a large town, and of the necessarily confined and ill-ventilated apartments devoted to the purposes of a nursery, has probably much contributed to the production of this disease. But, if my experience deceive me not, I should assert decidedly, that I have not seen so much advantage from the sea-side, with or without bathing, as, from its influence generally upon scrofulous ailments exterior to the cavities of the body, I should have expected; and I have recently seen two instances, with respect to both of which I have had frequent communications from the country, and their anxious relatives, which illustrate this point of the treatment.

In one—a sister of the child whose death was owing to suppurative inflammation of two of the bronchial glands and enlargement of others,—in whom the wheezing and cough have been so like hooping-cough that the friends have had recourse to the "salt of tartar and cochineal," the "sovereignst remedy" for that disease—the progress of the disease has been checked by keeping the patient constantly in the country, her time being divided between the higher parts of Essex, Bedfordshire, and Hampshire, at a distance from the sea. In the other, a swarthy, dark-complexioned, black-eyed child of a father whose look is unhealthy, and of a mother of a consumptive family, the wheezing and cough, connected apparently with glandular enlargement, continued unabated during a residence of nearly three months at Southampton and the Isle of Wight, but recovered upon her return to the most airy and dry part of Mary-le-bone, in which the parents reside.

And here I cannot deny myself the pleasure of adverting to an example of this disease which occurred many years since, which is admirably illustrative of the good effects of country air. It occurred in the child of a celebrated brewer of this town; and after having been for some little time under the care of Dr. Merriman, upon whose authority I venture to mention it, a consultation was held upon its case with the late Dr Sims. The latter, speaking of the treatment generally adopted in such cases by an eminent contemporary, emphatically stated his conviction that large bleedings, with calomel, were generally, according to his observation, rather injurious than useful; adding, that he knew of nothing which was decidedly beneficial but change of air. A lodging was taken for the child at Clapham, where it so far improved that it was thought justifiable to bring it back to London. Here, however, the malady returned; and at length the parents took up their permanent abode in the same district; and this sacrifice of convenience to the welfare of their child was amply rewarded by its perfect and permanent recovery.

But it is not enough that we thus employ remedies in the intervals, to prevent a recurrence of these paroxysms, although this is an all-important object, as it involves the permanent cure of the disease. It is probable that we shall not be present at the moment of attack, to superintend the application of proper means for shortening the duration of the paroxysm, and to insure the safety of the child; but it is the duty of the practitioner to put the nurses and friends in possession of those remedial agents which offer the fairest prospect of success. The child, then, being in what is termed "the fit," when there is a sudden and total cessation of the breathing, or when the struggle for its recovery is lengthened, the analogy of asphyxia from other causes, and more especially of some anomalous hysterical ailments, would lead us to apply strong smelling substances to the nostrils, and to dash the face with cold water, whilst the rest of the body is immersed in the warm bath; to which may be added strong friction of the ribs, spine, and sternum, with, or without, a stimulant embrocation. These are the principal means which analogy would suggest; they have for their object to excite the respiratory muscles to more vigorous and efficient action; and experience has contributed its sanction to what analogical reasoning would thus lead us to employ; for these appear to be the best and only efficacious remedies. To these means, however, may be added, where there is time for its preparation and administration, a clyster, with turpentine, assafœ-

tida, or opium, or consisting of a combination of these. The clyster also of soft soap has been much commended; but I have seen less advantage from the employment of these measures, than the commendations bestowed upon them would have led me to expect; and it must be obvious that, in a case wherein either the child recovers with a crowing inspiration within (at the latest) two minutes, or dies of suffocation, the remedy, if prepared and administered, will commonly come too late to be entitled to any credit in the cure of the paroxysm.

Looking, moreover, at such cases as very nearly allied in their general character to asphyxia from drowning or hanging, might it not be advantageous, if the practitioner be present at the time, and if it can be accomplished without force, to introduce a tube through the constricted glottis, or even in extreme cases to open the trachea, for the admission of air within the chest? "In a dog three days old," Le Gallois "having produced complete asphyxia by division of the recurrent nerves, when all sensibility was on the point of being extinguished, and he made only very distant efforts to inspire," made an opening into the trachea. "Upon the first inspiration air rushed into the chest through the aperture; the carotids, previously black, became of a bright red colour (beau rouge), and the animal recovered without further aid." It may be said, indeed, of these cases, as M. Bourdon alleges very truly with respect to fatal asphyxia from the "tiraillement" of the recurrent by an aneurism of the aorta, that "no one has yet tried tracheotomy under such circumstances;" but it would surely be worthy of a trial under similar circumstances with those of the dog in the experiment of Le Gallois; that is, "when all sensibility is on the point of being extinguished," and the child makes only very distant efforts to inspire.

In one of the cases which I have related, the mother described the veins during the fit as "very black, and shewing very much"—a state which evidently endangers the occurrence of venous congestion within the head, and some impediment to the return of blood through the lungs, and the deleterious effects of black blood both upon the heart and brain. In the case of the man, in the Middlesex Hospital, with cynanche parotidea, who died suddenly, upon a minute quantity of blood flowing from the external jugular vein, which was opened by the apothecary of the establishment, one more effort to inspire occurred. Might it not be well to have recourse to this very easy operation for the purpose of taking away such a quantity of blood as shall suffice to relieve at once the head from congestion, and perhaps the poisonous influence of blood which has not undergone its proper changes,—and at the same time the lungs and heart, which are embarrassed, the former from the cessation of the respiratory function, the latter for want of the due stimulus of blood possessing arterial properties?

Such are the practical suggestions which I have to offer as to those by no means unfrequent cases in which the crowing inspiration—the constriction of the glottis—arises from the injurious compression of cervical or thoracic absorbent glands upon the nerves which supply the trachea, and the opening muscles of the arytenoid cartilages. In the present state of our knowledge, it were too much even to insinuate that no other cause is capable of producing this peculiar ailment. This would be to commit the same error which I have taken the liberty to discountenance in others. It is quite within the bounds of possibility that irritation, or pressure, at the root of the par vagum, may either excite that extraordinary exercise of energy in the superior laryngeal nerve, which will occasion a constriction of the glottis by the contraction of its closing muscles, or paralyse the recurrent nerves which supply the opening muscles, or disturb the function of the heart, lungs, or stomach, by the affection of some other of the filaments of which the whole nervous cord is made up. It must be acknowledged, however, that it is exceedingly rare to find, from a cause seated in the brain or medulla oblongata, and therefore at the origins of these nerves, a morbid condition of a few only of the filaments which help to make up the trunk from which they proceed. Generally, either the whole nerve is excited, or it is paralysed; and this consideration has always appeared to me to render the exclusive influence of a diseased condition of the brain in closing the glottis, if not problematical, at least difficult of explanation. It is equally possible that violent impressions upon the remote extremity of these ner-

vous cords may cause an approximation of the sides of the glottis. "A blow upon the stomach doubles up the bruiser, and occasions that *gasping and crowing*, which sufficiently indicate the course of the injury*." The distention from a tavern dinner, or the injurious influence of wine of bad quality, or in large quantity, will produce hiccough, which is a rapid inspiration interrupted by a closing of the glottis. In children this same symptom is constantly observed from the distention of flatulency; "a little more severe," and the constriction of the glottis more complete, the crowing may possibly be produced. But these, and other causes capable of occasioning this sonorous inspiration, have been elucidated by others; and their investigation, even had I time for the purpose, does not come within the scope of the object which I proposed to myself in the series of communications which I am pleased to find have been thought worthy of insertion in the columns of the Medical Gazette,—which was, to illustrate the agency of one very important class of causes, which had hitherto evaded the notice of practical and pathological writers upon the subject of this disease.†

OBSERVATIONS

ON A

PECULIAR DISLOCATION OF THE LENS.

By R. T. Hunt,

Lecturer on Diseases of the Eye at the Pine-street School of Medicine and Surgery, Assistant Surgeon to the Eye Institution, &c. Manchester.

In the Medical Gazette of Nov. 12, 1831, will be found some remarks on injury of the lens, accompanied by the relation of a case in which the dislocated lens had passed through the sclerotica, and lay under the conjunctiva. The report is certainly imperfect, in consequence of its only extending to the fourth day after the extraction of the lens*. The following is the only addition I can now make to it.

After the lens was removed, the eye rapidly improved in general appearance; but there was a swelling in the situation from which the lens was extracted, formed by protruded vitreous humour. Pressure caused an escape of this humour through the ununited conjunctival wound. Supposing this tumor to be occasioned in the same manner with that caused by the lens, the removal of which gave him so much relief, the patient is very urgent to have this also opened, as he says it has something in it which makes his sight muddy. He was now desired to remove the strips of court plaister, when the eye became uneasy in consequence of their stiffness, and to apply the collyrium plumbi acetatis freely.

Oct. 31st.—Improving; vision much better. He complains of no pain; but the tumor caused by protrusion of the vitreous humour still continues. It is now more than two years since I last saw this individual; but although at that time the sclerotic laceration had not completely united, there was no further diminution of vision. Since then three similar instances have occurred in the practice of the Manchester Eye Institution; two under the care of my respected colleagues, Mr. Barton and Mr. Walker; the other under my own care. In the case treated by Mr. Walker, the injury was caused by a blow of the fist. The sclerotica was lacerated at the upper part, but much more posteriorly to the corneal junction than in Siddal's case; and the lens was not removed until about a month after the accident. The man stated that he could see for some days after the occurrence of the injury, and that the pain was very trifling until about a fortnight afterwards, when it became very severe. In both the other cases also, the removal of the lens was not effected until a length of time after its dislocation, and vision had suffered so much, either at the time the injury was inflicted, or in consequence of subsequent inflammation, that no improve-

* Sir Charles Bell.

† Dr. Ley has requested us to notice the following inaccuracies in his paper in our last No.:—P. 788, c. 2, l. 4, for neuralema read neurilema; l. 45, for consequence read consequences; l. 48, a semicolon should have been placed after the word plexus: p. 789, c. 2, l. 41, for comparison read compression: p. 790, c. 1, l. 17, for respiratory read inspiratory: p. 794, c. 1, l. 20, for Morgagni read Mascagni; l. 55, the whole sentence, to the end of the paragraph, is a quotation from Baillie.

* My excuse for inserting a report of a case still under treatment, is, that Mr. Mackenzie had, a short time previously, directed the attention of the readers of the Medical Gazette to the different kinds of dislocation of the lens; and I thought that the account of a rather unusual variety would be more interesting at that period than subsequently.

ment in this respect could be reasonably expected, although even in these instances the general condition of the eye appeared much improved, and considerable relief was obtained by the operation. After the lens has been thus forced through the tunics, such inflammatory action may be set up, particularly in the sclerotica and conjunctiva, upon both which this must now act as a foreign body, as may lead to the most serious results.

An extensive laceration of the sclerotica, not complicated with dislocation of the lens, owing to the degree of violence requisite to produce such a lesion in this strong fibrous texture, will frequently, even under the most judicious treatment, be succeeded by general inflammation of the globe, and total loss of vision. How much more danger is there of such a laceration, when we have, in addition to the laceration, the dislocated lens bound down upon the wound by the conjunctiva, which, from participating in the injury, soon becomes inflamed, and is sometimes quite in a state of chemosis—not only thus increasing the pressure of the lens upon the wounded sclerotica, but also the irritation caused by the tumor pressing upon the sensitive conjunctival lining of the lid. Now if, in such instances, an incision be made in the conjunctiva, and the lens extracted, the case, to say the least of it, becomes less complicated by the removal of that which had become a foreign body, and consequently a more favourable result may be expected. The case of Siddal is evidence that such an expectation will not always be disappointed.

Mr. Lawrence has done me the honour, in his "Treatise on Diseases of the Eye," to notice the case of unusual dislocation of the lens. "The lens has not only been displaced by a blow, but forced through the external proper tunics, so as to lie under the conjunctiva. It has escaped on puncturing the tumor caused by its presence. Vision was lost*."—Page 143.

I am fully aware of the trifling estimation in which any of the opinions of one so unknown as myself will be held, in comparison with those of so eminent a surgeon as Mr. Lawrence; but this knowledge will not prevent me from exclaiming against such an inaccurate statement as the foregoing. It is the latter part of the sentence to which I refer, in which Mr. Lawrence says "vision was lost." How he can have come to such a conclusion, whilst reading the report of this case, is to me most unintelligible. "Oct. 28th.—The progress of the case, up to the present time, is very favourable. He can now distinguish objects, and there is no appearance of opacity in the pupil." How different the abbreviated case is from the original, I leave the readers of the Medical Gazette to determine. I will only add, that when an author, and one too of such high rank in the profession as Mr. Lawrence, places an advertisement at the commencement of his volume, in which he states that "the opinions and experience of others are quoted and examined," it may be too much to anticipate a perfectly unprejudiced decision, but the least that his readers should expect, is accuracy in his quotations.

"* London Medical Gazette, vol. ix. p. 178."

CASE OF JAUNDICE WITH CEREBRAL AFFECTION TERMINATING FATALLY.

To the Editor of the Medical Gazette.

SIR,

IN consequence of an interesting paper on jaundice, accompanied with coma, by Dr. Griffin, which appeared in your journal of Saturday, Feb. 22, I have been induced to submit to your notice the particulars of the following case.

Ann Carter, æt. 16, single, was admitted into St. George's Hospital, under Dr. Wilson, on September 18, 1833.—Pulse 80; skin suffused with bile; tongue clean; bowels open; urine scanty, of a deep yellow colour; catamenia irregular. Is said to have had very low spirits lately; has been crying nearly every day; *her head is very confused*, and she cannot answer well for herself. Her mouth is parched and dry; much thirst; pain in the hepatic region; *very severe headache;* pain on inspiration; "nasty taste in the mouth." Has been ill with jaundice a fortnight; is very sick, and vomits frequently; great weight over her eyes; sees every thing of a yellow colour; *is very drowsy.*

19th.—The water to be drawn off.

Insensible; has brought up much blood at different times this morning; her breathing is very laborious, and the whole of her body is of a deep yellow colour.

Died at two, P.M.

Note.—She became quite insensible last evening, having been very much confused, and nearly *comatose*, since her admission. Bowels open last evening; motions reported as very pale, of a light clay colour.

Sectio.—The dura mater was deeply stained with yellow; also the glandulæ pacchioniæ. The convolutions of the brain were flattened. The lateral sinuses were filled with blood. *No effusion, nor undue vascularity, in the substance of the brain.* The inner lining membrane of the upper part of the trachea very vascular. A large earthy concretion, about the size of a chestnut, in the bronchial gland, at the bifurcation of the trachea. The liver soft, flaccid, and unusually small; its substance in parts stained with bile; there was no fluid bile in it. The ductus communis choledochus not obstructed, but larger than usual. The left kidney of a bright yellow colour; the right not so yellow. Heart small. Inner coat and semilunar valves of aorta very yellow. Inner membrane of the stomach granulated, and suffused with bile. Spleen healthy. Pancreas not stained.

In this case there was nothing in the brain to account for the violent head symptoms during life, which appear to have depended on a deranged state of the liver, just as they sometimes coincide with a morbid condition of the kidneys, or the mucous follicles of the bowels, in common continued fever. It is worthy of remark, that Mr. Twining, in his Clinical Illustrations of the more important Diseases of Bengal, states, page 258, "in some cases I have known robust patients die with symptoms of oppressed brain, within thirty-six hours after the sudden appearance of intense jaundice; for the accession of which last-named disease no cause could be assigned."—I remain, sir,

Your obedient servant,

C. J. B. ALDIS, M.B.

13, Old Burlington-street,
Feb. 24, 1834.

DEFENCE OF THE MEDICAL OFFICERS OF THE LIVERPOOL DISPENSARIES.

To the Editor of the Medical Gazette.

SIR,

OBSERVING, in the last Number of your Gazette, some observations by Dr. Collins, of this town, on the officers of the Liverpool dispensaries,—which observations are calculated to convey an erroneous impression to the public,—I beg your permission to state shortly the real facts of the case.

By the original laws of the dispensaries, no governor was allowed to vote at elections until one month after becoming a subscriber. About four years ago, however, the committee, in the exercise of their power "to make such temporary regulations as they think fit, (which regulations are to stand confirmed, unless annulled at a general meeting of the governors,") abrogated the law in question, on the ground, that while a few additional subscribers might be gained on the occasion of a vacancy, it was extremely improbable, that, in a constituency of 1500, new voters would be introduced to such an extent as to affect "the purity of election." This resolution of the committee not having even been alluded to at the subsequent general meeting of governors, of course stood confirmed; but so ignorant were the medical officers, and the governors generally, of the change which had been made, that when an election took place last year, (the first since the law had been annulled,) it was generally supposed that the original law was still in existence; and several of the medical officers who attended the meeting on the subject of the Aldersgate-street Dispensary, were even then not aware of the alteration which had taken place. As soon as the discovery was made, it was determined to bring the question before the next general meeting of governors, with a view to the re-introduction of the original law. It was not deemed necessary to call a special meeting, as the annual meeting was very shortly to be held; and the medical officers having always been on the best possible footing with the governors, such a step would only have excited a needless agitation. Accordingly, at the annual meeting, held on the 7th instant, the day before the publication of Dr. Collins's letter, it

was almost unanimously "Resolved, that no individual be allowed to vote at any election, or at any general meeting of the governors, until three months after the payment of his first subscription."

Thus, at the very first general meeting at which the question had ever been discussed, the matter was placed on its proper footing; the trifling opposition offered to the motion being on the ground that it appeared to convey a reflection on the officers who had been appointed in the absence of such a law, although it was admitted that no improper advantage had been taken of its absence by any of the candidates.

Under these circumstances, is it fair to draw a parallel between the cases of the Aldersgate-Street Dispensary and the Liverpool Dispensaries?—or ought the officers of the latter institution to be charged with inconsistency, because they expressed their approbation of the conduct of the officers of the former charity?—I am, sir,

Your obedient servant,

W. H. DUNCAN,
Physician to the North Dispensary.

Liverpool, Feb. 18, 1834.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Annales d'Hygiène Publique et de Médecine Légale. Janvier, 1834. 21e Numero.

ONE of the most remarkable papers in the present number of the *Annales*, is an *Affaire d'assassinat*, which may be more appropriately entitled, a

Medico-legal Examination of the Remains of a Body that had lain in the earth for above Eleven Years.

IN the year 1821, a widow lady, of the name of Houet, residing in the city of Paris, disappeared; and certain persons, Bastien, Robert, and Robert's wife, who had taken the house, No. 81, Rue de Vaugirard, were suspected of having made away with her. A judicial inquiry was pending ever since, in the Court of Assize; but the accused, for want of evidence, had been set at liberty. Not long ago, however, some information was obtained touching a body said to have been buried for about eleven years in a particular garden. An investigation was accordingly set on foot; and by the dint of patient and ably-directed research, such satisfactory evidence was procured of the identity of the remains, and of the manner of the death, that the prisoners were convicted, and condemned to the galleys for life.

The first part of the inquiry—the juridical exhumation—was conducted by M. Boys de Loury. After excavating different parts of the garden for about five hours, one of the workmen hit upon a hollowed spot, in which there were bones. The greatest care was taken to uncover them with the least possible disturbance; they were evidently those of a human body, reduced almost to a perfect skeleton. A drawing was made of the parts *in situ*. The figure reposed on the left side; the head was bent forward on the neck; the vertebral column was curved; the right fore-arm was raised, so that the bones of the hand nearly touched those of the face. The pelvis was turned obliquely upwards, resting on the left haunch. The thigh-bones were raised considerably, and the legs were crossed beneath them. The colour of the remains generally, was between an ochre and a brown; and when the earthy matter was removed from some of the long bones, the uncovered parts were found to be of a deep red colour.

The grave was four feet deep, funnel-shaped, measuring five feet and a half in length at its upper part, but at the bottom only two and a half: its greatest breadth was about two feet. Some lime-stone had been placed over the body, so as to form a sort of vault. Having made these general observations, the particular parts were next examined. The skull was small and lengthy in its shape: it seemed, by the way, from the position of the head, that the body had been thrown into the grave head foremost. The parietal bones were very yielding: the sutures were well knit; the teeth white, and had been used with care: three molars wanting, and one of the incisors carious. A small quantity of light-coloured or ruddy hair was found, having some grey mixed with it.

The state of the neck was particularly striking. The third, fourth, fifth, and sixth cervical vertebræ, as well as the right clavicle, were held together by a

blackish mass, in the composition of which there could not be recognized any tissue. *This mass was surrounded at its lower part by several twists of a cord, two lines in diameter;* the cord was in a very decayed condition, and no knot could be found upon it. Minute attention was subsequently given to this *pièce de conviction*, and the obvious inference, that the deceased had been strangled, was fully borne out by all the direct and collateral circumstances.

Among the bones of the left hand was found a gold ring, of small diameter, carved in *facettes;* and several small well-formed finger nails were also discovered. The pelvis, from its shape and proportions, could only be that of a woman. Some portion of cloth, probably part of a stocking, was found near the legs; but upon exposure to the air, it rapidly crumbled to dust.

We need not enter into more minute details descriptive of the several parts found. Other reporters, MM. Orfila, Marc, Barruel, and Chevallier, were afterwards added to M. Boys de Loury; and three or four elaborate documents were drawn up, of the first of which we shall give the resumé.

"From the preceding facts, we feel ourselves justified in concluding,

"1. That these bones are those of a human skeleton.

"2. That the skeleton is that of a female.

"3. That this female had attained the age of from 60 to 70.

"4. That her stature was about 4 feet 8 or 9 inches (nearly 5 feet Eng.)

"5. That the hair of the female, which was of a bright blond colour in youth, was mixed with grey at the time of her death.

"6. That the hands were small.

"7. That during life, the bones had never suffered any injury.

"8. That this woman died of strangulation, and that the act was, to all appearance, homicidal.

"9. That the body must have lain for several years in the earth.

"Signed, &c."

A very ample report follows, stating the processes which were adopted for analysing chemically the various debris about the body. Thus the earth at the bottom of the grave was examined, as were also certain concretions which were taken to be biliary calculi, and the softened masses in the neighbourhood of the pelvis: but nothing very important was detected in this search.

Justice was satisfied by these investigations. The prisoners, who had been long suspected, were at length brought to trial (nearly twelve years after the murder), and have been condemned, for the remainder of their lives, to forced labour. They had a narrow escape of the guillotine: only for some mitigatory circumstances which induced the jury to recommend them to mercy, they would have been executed.

MEDICAL GAZETTE.

Saturday, March 1, 1834.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

PROPOSED UNIVERSITY IN LONDON,

NOT THE "LONDON UNIVERSITY."

IN the annual report made to the general meeting of proprietors of the London University, on the 26th inst., they are informed that "the Council have not yet overcome the difficulties which impede their attainment of a charter of incorporation, but that they have taken measures to bring the subject before the Privy Council."

To the joint-stock company in Gower-street obtaining "a charter of incorporation," as King's College has already done, there can, we conceive, be no reasonable objection; but the truth is, that their demand is by no means so limited as these expressions would imply, inasmuch as it extends to claiming the privilege of conferring all degrees, excepting only those in theology. On the general question of their claims to a charter we shall not at present enter; but the power of conferring the highest honours in medicine, is a subject which involves too deeply the interests of our profession, to be suffered to pass unnoticed.

There exists, we believe, a very general feeling, that degrees in physic ought to be attainable in this metropolis. The high and increasing reputation of its medical schools, and the prodigious advantages afforded by its great hospitals, have long induced many to resort to it, despite of the bonus offered by the northern capital, in the shape of a medical degree. Indeed, it seems no more than consistent with common reason and justice, that the highest privileges should exist, and the highest distinctions be attainable, where the best and most varied opportunities of study are to be found; in short, that the great medical establishments of the capital should be recognised as Colleges, and amalgamated on equal terms into an University—or at least that those who have pursued their professional studies within their walls should, after the requisite probation, receive their degrees in physic. This is the view which those connected with all the great schools in London, with but one exception, we have reason to believe, have concurred in adopting; and the point will doubtless be among those which will occupy the attention of the Committee even now engaged in investigating the various subjects connected with medical education and polity. So reasonable does the desire appear to be of receiving the highest honours in medicine where the knowledge of the science has been acquired, that we expect to find that the difficulty, if there be any, will rather consist in determining where the privilege ought to be vested, than in conceding the principle of its being expedient to grant such power to some metropolitan institution.

Under these circumstances we should probably have refrained from making any observations upon a subject which is likely to be soon more efficiently discussed elsewhere, had not some of the proprietors of the establishment in Gower-street chosen the present moment again to step forward,—or rather, to steal, with silent and noiseless tread,—to the closet of the Minister, and endeavour, by private solicitation, clandestinely to obtain the boon they have so long coveted, and thus virtually to forestal the result of the parliamentary investigation which is already in progress. True, this request is indicative of that habitual modesty which characterizes all their proceedings: because, while other schools are content to abide the scrutiny, and take their stand on the basis of their merits, the proprietors of the *soi-disant* University would seem to shrink from the result of free and unfettered competition, and strive, with worldly cunning, or perhaps with conscious weakness, to intrench themselves behind a barrier of chartered prerogative and exclusive privilege.

The Council inform us, that they have taken measures to bring their claims before the Privy Council; and we know that with this view they very recently renewed their application at the Home Office—an application which, though periodically reported to have been at length unsuccessful, has made no step towards a favourable termination, since the royal assent was originally refused to it. Should they fail in these quarters—a result which we believe they themselves anticipate as all but inevitable—the next step will consist in an application to Parliament analogous to that which was made and negatived last session. And here we cannot but observe, that it is an extraordinary, and not unamusing illustration, of the inconsistency of poor human nature, to witness some of the very same persons who, in their places in the House of Commons, are wont to denounce all monopoly in general—and who, in the fulness of their liberalism, use the term almost as a watch-word—deliberately and perseveringly endeavouring, in their own particular case, to establish a monopoly in

no degree less obnoxious than any of those which, with so commendable a zeal, they are anxious, in every other instance, to abolish. In the present case, too, such an application to Parliament becomes tenfold more glaring, by the request which it conveys being in direct opposition to the principles of the parties from whom it emanates, and to the general spirit of the times, as well as by the fact that no inconsiderable number of those who will be called upon to legislate are actually proprietors of the institution which it is intended to benefit, and thus have a direct pecuniary interest in the result. When it is remembered that a sum of money, which had been collected for a totally different purpose, was lately applied to the support of the Medical School in Gower-street, we may be permitted, without being very uncharitable, to surmise, that the contingent effect upon shares, now at a discount of 75 per cent., may by possibility have some influence on the votes of honourable members;—and that sanguine financiers may opine—as Dr. Johnson did of St. Andrew's—that their institution might get rich *by degrees*, were exclusive privileges bestowed upon it.

It is scarcely necessary for us to remind our readers, that we have from the first protested against the injustice and impolicy of bestowing on any particular establishment an arbitrary right, which would at once place it above the reach of its most meritorious rivals;—which would free its professors from the stimulus to exertion, which competition never fails to engender;—which would lessen the capital of intellect engaged in the difficult art of communicating knowledge to others, while it placed the election of public teachers in the hands of those incompetent to judge of their qualifications, thus perpetuating the worst vices of that system which has sapped to its foundation the stability of the great northern school;—and, lastly, which would continue and extend that most palpable and glaring source of corruption, in the conferring of degrees, by which the professors are constituted both the teachers and the judges of their own pupils—their interests being thus placed in direct opposition to their duty.

But it is argued by the proprietors of the establishment in Gower-street, with a view of counterbalancing this mass of inconsistency to themselves, injustice to others, and injury to science, that their institution is a "university," and therefore possesses, on this ground, merit superior to those of the private schools,—an argument which consists simply in first assuming a name which was marked by deception in its very origin, and then modestly claiming the advantages of the imposture. We hold, and are prepared to demonstrate to any unprejudiced mind, that the Medical School in Gower-street is in many respects inferior, and in no one respect superior, to numerous other schools in the metropolis; and that this relative position must continue, as long as medicine is a science more readily acquired in the wards of a great hospital than beneath the shade of a lofty portico. It is, we allow, both reasonable and just that the power of obtaining degrees in medicine should exist in the metropolis, and especially that English Dissenters should, in this respect, be freed from the inconvenience and disadvantages which they are placed under by the restrictive regulations of Oxford and Cambridge. But, in order to accomplish this desirable object, it is as unnecessary, as it would be unadvisable, to establish any monopoly.

There exist in London numerous schools of medicine, in which some of the greatest men of the past age formerly taught, and which are now adorned by successors not unworthy of those whom they have followed. It is

long since* we advocated the expediency of establishing some general plan, by which these might be formed into one great university, of which the recognized schools would constitute the colleges, much in the same manner as exists in Paris; the duty of examining aspirants, and the privilege of conferring degrees, being invested in some independent body not concerned in teaching, and free from the sources of corruption above alluded to;—sources which have lately led to the doctorate in physic being often most unworthily bestowed, by which the very distinction itself has well nigh been brought into contempt. In this general scheme, we would give to the Gower-street Institution the same place as to the other great schools, keeping no privilege from it which it consented to share in common with its fellows. Let this be done, and all the advantages which the public could attain from the degrees being conferred in London would be at once secured; while all the evils which result from checking fair and liberal competition would be effectually avoided. It is against monopoly only that we protest, whether in favour of the so-called London University, or any other establishment whatever; and so just do we feel these objections to be, that we believe they only require to be fairly stated in order to be admitted. We shall only farther add, that from information which we have obtained from various satisfactory sources, we feel convinced that many influential members of Parliament—some of whom are connected with the London University—are averse to granting it any exclusive privileges; and we have little doubt that the present session, which will probably witness the renewal of the application for a monopoly in physic, will also enable us to record its complete and final rejection.

* See Medical Gazette, October 1832.

COLLEGE OF PHYSICIANS.

Monday, February 24.

Sir Henry Halford, Bart., President, in the Chair.

At the evening meeting of Monday last—the second of those for the season—the following interesting paper, from the pen of Dr. Macmichael, was read by the Registrar.

An Account of the Harveian Preparations in the Museum of the College of Physicians. By Wm. Macmichael, M.D.

It may perhaps appear singular to attempt to occupy the attention of this assembly by an account of any of the preparations in the museum of our College; but those of which I propose to speak are so old, so well authenticated, and connect themselves so remarkably with one of the most important and brilliant discoveries in physiology, as to induce me to hope that a slight sketch of their history will not be deemed altogether uninteresting. Up stairs, in the gallery, are six tables, or boards, upon which are spread the different nerves and blood-vessels, carefully dissected out of the body: in one of them, the semi-lunar valves of the aorta are displayed. Now it is generally supposed, that the idea of the circulation of the blood was chiefly suggested to Harvey by the appearance of the valves of the veins, exhibited to him whilst prosecuting his studies at Padua. And this conjecture is extremely probable; for what purpose could they serve but to prevent the return of the blood to the extremities? But valves placed at the origin of the aorta would equally demonstrate the same truth, since *their* obvious use must be to impede the return of the blood to the heart.

Thus this united apparatus must have been constructed to contribute to the due performance of the same function. The preparation I allude to would materially assist the teacher in proving his doctrine, and was doubtless employed by Harvey during the delivery of his Lumleian lectures; in the course of which he was for so many years endeavouring to convince his hearers of the truth of his novel opinions.

At this time of day, when the circula-

tion is taught as a fundamental—almost as an elementary—doctrine of physiology, it appears scarcely credible that the discoverer should have spent nine years in satisfying himself and others of its truth; and when he ultimately resolved to give it to the world, to have deprecated the envy and enmity of mankind in the following remarkable words: "However, my resolution is now set down: my hope is in the candour of those which love truth, and learned spirits *.

These relics are upwards of 200 years old; and that any thing like the aorta should now be distinguishable, shews the care and veneration with which they have been preserved by a family proud of the fame and glory of their illustrious ancestor. They were presented to the College by the Earl of Winchelsea in 1823, having been preserved at Burleigh-on-the-Hill, his lordship's seat; and in a letter, written to the president, Sir Henry Halford, that nobleman expressed a hope that they might be deemed worthy of acceptance by a body of which Harvey had once been so distinguished an ornament.

Harvey himself was married to a daughter of Dr. Launcelot Browne, but had no children; but the Lord Chancellor Nottingham, who was the ancestor of the Earl of Winchelsea, married his niece, who was a daughter of Daniel, the third brother of Harvey. Upon the death of the great physician, as he left no issue, various memorials of him were distributed amongst the different members of his family, who naturally would be desirous of cherishing his memory.

At Rolls Park, in the parish of Chigwell, in Essex, the seat of the late Admiral Sir Eliab Harvey,—conspicuous for his bravery at the battle of Trafalgar, where, in the Temeraire, a ninety-eight-gun ship, he gallantly followed second in the attack,—are painted on the pannels of the large dining-room, the portraits of Thomas Harvey, surrounded by those of his seven sons, of whom William, the physician, was the eldest. The admiral was descended from Eliab, the fifth son of Thomas Harvey; and after the admiral's death, which happened a few years ago, many documents were shewn to me, by the kindness of one of the ladies of the family, which proved the affectionate zeal with which they had been preserved by his collateral descendants. They consist not only of the patents of the appointments conferred by King Charles I. upon Harvey, but also of other marks of the high esteem in which he was held by that monarch. Amongst the latter is a document, proving, in the most unequivocal manner, the long-tried and unwearied loyal attachment of the subject to his sovereign, during the turbulent period of the civil wars. These records are the more curious, since we know, that besides the confidence placed in the physician by the king, Charles took an interest in his pursuits, was distinguished for his own love of science, and did all in his power to promote its successful cultivation. In his works, Harvey mentions, when speaking of the formation of the egg-shell, "that he had seen an exceedingly small egg, which had a shell of its own, and yet was contained within another egg, greater and fairer than it, which also had a shell too. And this egg I shewed King Charles, my most gracious master, in presence of many others."

Though the short tract in which Harvey made known his doctrine to the world has been characterized as one of the most admirable examples of a series of arguments, deduced from observation and experiment, that ever appeared on any subject, yet it is well known that the reception which the discovery met with from the public forms one of the most curious chapters in the history of philosophy; for it appears that its truth, after being at first denied, was at length universally admitted, but that its novelty was then called in question. The opponents of the doctrine endeavoured for some time to trace, in the writings of the ancients, passages which might ingeniously be perverted into some obscure allusion to the same theory. The clamour, however, at length subsided, and the merit and originality of its author were acknowledged and fully appreciated. But this was a period favourable to the progress of true knowledge; for the publication of the great work of Lord Bacon, followed, by a few years only, the announcement of Harvey's discovery; and the foundation of the Royal Society (to which, let it always be remembered, that physician mainly contributed), soon after established ex-

* Eng. Ed. p. 49.

perimental science in this country, upon a basis secure and firm, from which it has never since declined.

Nine years after the death of Harvey, was published a curious treatise, entitled Γηροκομία Βασιλικὴ, or King Solomon's Portraiture of Old Age, by Dr. Smith. Whatever may be thought of the ingenious attempt of the author to prove that under the allegory of the last chapter of Ecclesiastes, beginning with the divine exhortation, "Remember thy Creator in the days of thy youth," is contained an anatomical description of the symptoms of extreme old age, the book itself is full of piety and learning. Nor does the author stand alone in his opinion; for many commentators upon the sacred writings have thought that the expressions which occur there, bear allusion to the different parts of the human body. The silver cord, for instance, is thought to mean the thread of life, or spinal marrow; the golden bowl to signify the heart; and the wheel at the cistern, the tubes and arteries about it. Now upon looking at that chapter in Harvey's work, which contains his description of the heart's action in propelling the blood, it is remarkable that the very phrase, nay, the identical term, is used by him, which is employed by the Royal Preacher—"Primum sese contrahit auricula, et in illâ contractione sanguinem contentum (quo abundat tanquam venarum caput et sanguinis promptuarium et *cisterna*) in ventriculum cordis conjicit*:" which is thus translated in the old English version of Harvey's book:

"First of all the ear contracts itself, and in the contraction throws the blood, with which it abounds, as the head-spring of the veins, and the cellar and *cistern* of blood, into the ventricle of the heart."

Dr. Smith is so struck with the importance of the discovery of the circulation, that in a burst of enthusiasm he says, that Harvey had contributed more to the understanding of this and many other places of Scripture, than all that ever undertook that charge.

But, to return to the preparations, to which I first begged to call your attention. They were either made by Harvey himself, or brought by him from Italy in 1602. Similar ones were bought by Evelyn at Padua, and presented to the Museum of the Royal Society, formerly kept at Gresham College: these are now in the Museum of the Royal College of Surgeons. I am informed, that intelligent foreigners, who have inspected these preparations in London, assert, that similar ones are now nowhere to be seen in any anatomical museum on the Continent; though it is evident, from the plates which are to be found in the works of our older anatomists,—for example, from those which are in the Anatomia reformata of Bartholinus,—that the figures representing the distribution of the arteries and veins, are copied from *such* tables.

The art of injecting preparations, brought to such great perfection by Ruysch, the professor at Amsterdam, was not known at this period; and the tables now spoken of are of course rude in comparison with the ingenious and complicated preparations of modern days.

But, when we reflect upon the number of years which have elapsed since they were made, the great lecturer in whose hands they were exhibited, and the important discovery towards the elucidation of which they must have so materially contributed, it is impossible not to regard them with feelings of the deepest interest. The doctrine of the circulation has exercised the most important influence upon the speculations of all succeeding physiologists; but though Harvey disputed, by his discovery, the notion previously entertained that the use of the pulse was to refrigerate the blood, yet many points connected with this important function still remain unsettled.

Whether the temperature of the arterial be greater than that of the venous blood,—whether, during respiration, the changes of the vital fluid are brought about in the lungs only, or in the body at large,—are questions concerning which there are still warm and acrimonious disputes. Their direct solution might explain the immediate source of animal heat. Upon this subject, a modern writer of great originality* observes, that, wherever the carbonic acid is formed, the heat of the body must also be evolved; and that he has long been of opinion, that the acid is formed and the heat is evolved not merely in the lungs, *but all over the animal frame in the extreme textures*, where the blood is converted from arterial to venous.

* De Motu Cordis, cap. v. p. 33.

* Dr. Stevens.

If to the novel light that has been so recently thrown upon the condition of the blood, in the state of health and disease, we add also the progress made in our knowledge of the nervous system, —I allude particularly to the double origin of those nerves which arise from the spinal marrow, and the two-fold functions of sensation and motion they perform,—we should be encouraged in our patient investigation after truth, and never forget the modest manner in which Harvey himself speaks of his own immortal discovery :—

" This may perchance fall out now in the motion of the heart,—that from hence the way being thus pervious, others, trusting to more pregnant wits, may take occasion to do better and search further."—*Ed. Lond.* 1673, p. 17.

RE-VACCINATION OF THE PRUSSIAN ARMY.

A CIRCULAR, dated Berlin, March 15, 1833, signed by — Von Wiebel, Chief of the Military Medical Staff, declaring that as the results of the re-vaccination of the army, as already effected, fully proves its necessity, it appearing that, in the guards alone, 1425 out of 2641 exhibited the true vaccine pustule, the order, therefore, for re-vaccinating all recruits is made absolute, and the physician-in-chief of every division is required to procure and collect from all the several regimental surgeons, correct lists of all the men who have been re-vaccinated, as well as every circumstance coming under their observation, connected with the small-pox, and to report the same every year, at the end of February, to the Royal Military Council. This is followed by a statement, entitled " *Collection of the reported results of Re-vaccinating the Army.*" Whereas a number of individuals have been attacked with small-pox, and some have died in consequence, notwitstanding that strongly-marked scars unquestionably proved their having been vaccinated at an early age, it is, nevertheless, apparent that, in advanced years, they still are liable to be infected; and that such is likely to be the age at which they can be admitted to military service. Hence, on the representation of this fact, by the chief staff physician, to the commander-in-chief of the army, an order was dispatched, on the 26th March, 1831, to all the medical officers of the army, for the re-vaccination of all the men who may appear to be possibly liable to suffer; as well as all recruits whatsoever, whether they have marks of previous vaccination or not. This order was attended to by the several corps which it reached, as far as could be effected, and with the following results. In the 3d corps of the army, being at Erfurt, in 1831, where the small-pox was raging, the 24th regiment of Infantry, and the Fusileers of the 20th, were re-vaccinated, and, out of 6020 men, 2354 exhibited pustules; among which, more than one-eighth proved of the true vaccine character. In the 8th corps, 2784 were vaccinated, and 925 took; among which, also, about one-eighth proved true vaccine.

In 1832, 3942 of the 3d corps were vaccinated, and 1594 exhibited effects; but, as in the rest, somewhat more than one-eighth were true vaccine: in the 5th corps, of 3234 vaccinated, 2535 were affected in the aforesaid proportion. As yet, there are no accounts of the other divisions of the army, to which, however, the order has been sent and executed; the royal military chief being desirous that the whole army shall be placed in safety on this head. There being great doubts of the extent of this prophylactic measure, either from the possible failure of the original vaccination, or from the effect wearing out by time; at all events enough is established to prove the necessity of the measure; and it is notorious that, after the re-vaccination of the doubtful men, and the new recruits of the Fusileer Battalion, at Erfurt, not one became infected, although closely in contact with very many violent cases of the disease. The circular goes on to direct that a constant attention be paid to the re-vaccination of the recruits, and gives some minute military regulations for the purpose, demanding a regular return to be made as before mentioned, after the following manner:—1, name of the regiment; 2, place; 3, name of the men; 4, number; 5, if marked by previous vaccination (*a*) certain (*b*) uncertain (*c*) none; 6, the re-vaccination (*a*) regular effect, number (*b*) irregular, number (*c*) without effect, number; 7, repetition on those which failed, (*a*) with effect (*b*) without; 8, number of pustules going through their course; 9, account of cases occurring during the year, in spite of vaccination, (*a*) varicella (*b*) varioloid (*c*) small-pox; 10, general remarks.—*Rust's Magazin*, and *Lane's Monthly Archives.*

M. ORFILA.

THE King of the French has bestowed a new mark of his favour on M. Orfila, by appointing him a Member of the Royal Council of Public Instruction—a vacancy having occurred by the death of M. Gueneau de Mussy.

CLINICAL OBSERVATIONS

ON

FALSE ANEURISMS OF THE BRACHIAL ARTERY.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

Venesection is commonly supposed to be so simple an operation as not to be deserving of much notice. That it is so considered is only an instance of the low opinion generally entertained of the offices of minor surgery. Hence, however, we can account for the accidents which have so repeatedly occurred within our observation during the last twelve or fifteen years. The hospitals abound with the higher class of students (*élèves*), who do not care for bleeding; and those are followed by a still greater number of pupils, who are admitted to practise without having ever performed venesection. How often may we see in the clinical wards five or six punctures made in the skin before the vein is opened! It is to this awkwardness that those phlegmons are to be attributed which ensue in those cases; it is to this that we must likewise attribute the great number of cases of phlebitis, which are latterly so common, and were formerly so rare. The ill state, or unfitness, of the instrument employed, also frequently leads to serious consequences. But it is chiefly to inattention to a few simple principles that we must trace the occurrence of those arteriosovenous aneurisms, diffused and circumscribed, to which we have had so often to call your attention. Towards the end of the year 1831 I shewed you two persons who had been operated on and cured of those aneurisms; and we shall certainly have occasion to shew you some more in the course of the present year. I can safely say that, for the last fifteen years, there has scarcely a year passed by without my being consulted twice at least about cases of this kind; and if other surgeons be similarly consulted, it is easy to infer the frequency of such accidents. Yet very simple precautions would serve to prevent them:—1. The operation ought never to be performed till the beating of the artery is previously felt; 2. The vein should never be opened in front of this artery; 3. Other veins should be preferred. It is true that the latter are sometimes difficult to be found, and that frequently they do not yield so much blood as may be wished; but these inconveniences are trifling compared with the accidents to which we at present allude.

It has long been usual to appropriate the name of *false aneurism* to a tumor formed of blood, confined either within the arterial sheath, or in the cellular tissue which surrounds the red-blooded vessels. At one time the disorder shews itself immediately after a wound; at another an interval more or less protracted occurs after the infliction of the wound. There are two kinds of false aneurism—the primitive, or diffused, and the consecutive, or circumscribed — differences which are founded on the time and mode of the effusion of blood from the arterial vessel. There are still other distinctions made relative to the parts which constitute the aneurismal cyst; but these belong to the consecutive kind. Sometimes the walls of the sac are formed of the surrounding cellular tissue. The lamellæ of this organic element, distended by the blood, which is extravasated slowly, or drop by drop, are pressed against one another, and form a cavity of variable magnitude, opening into the wounded artery by a small aperture. In other cases the arterial sheath is cicatrized during the employment of the compress, while the lips of the wound in the interior coats are still apart, or connected but with an imperfect cicatrix. When the compress is removed, the lateral effort of the blood raises up the filamentous sheath, isolates it from the fibrous tunic, and disposes it into the form of a cyst. In still other instances, the lips of the wound in the artery are closed by a membrane of new formation, resulting from the exudation of albuminous matter. There are cases on record of arterial wounds, which, after having been for a time staunched by a small clot supplying the solution of continuity, upon this clot being displaced by some accident, become affected with circumscribed false aneurism.

We have seen persons having sacciform false aneurisms, which it was attempted to cure by Anel's method—but in vain; some of them were operated on a second time; and in one case amputation of the limb was necessary.

True aneurisms of the brachial artery, at the bend of the arm, are very rare: the case reported in Pelletan's Clinique is probably the only well authenticated one on record. As for the two cases of this kind reported by Scarpa as occurring to Paletta and Plajani, they are not sufficiently exact; and the same may be said of those given by Saviard and Hodgson. Not so, however, with *false* aneurisms, whether primitive or consecutive, occupying this region; these were, in fact, the only aneurisms which were for a long time known. Galen, Celsus, Ætius, describe them, and give directions for their treatment. It is rather surprising that operations of this kind should

have been practised so often, without discovering the laws of the general circulation; indeed, long after this great discovery, much ignorance prevailed as to the course which the blood took on the application of ligatures to the arterial trunks. Heister first pointed to the anastomoses. Before his time, the process was explained by supposing a second brachial artery. Sharp asserted this opinion as a matter of fact; but soon after Molinelli, in the Acta Bonon., and Charles White, demonstrated with sufficient clearness the agents in the collateral circulation. Subsequently, the injection of an arm in which the brachial had been spontaneously obliterated, gave Pelletan an opportunity of displaying the anastomotic passages. The lapse of half a century has given rise to much improvement in this part of science: at present every thing of this nature is foreseen, and the surgeon knows perfectly what will take place.

We have said that lesion of the vessel in phlebotomy was one of the most common causes of this sort of aneurism. The occurrence of the lesion is often the effect of mistake. There are persons in whom the artery lies so superficially,—its volume, its colour through the skin, and other peculiarities, are so striking,—that the operator has often been tempted to puncture it, until he fortunately recollected the caution required. On laying his finger upon the vessel, the pulsations are immediately perceived; the vein is found to lie more deeply at its side. Whenever a vein is thus situated—running alongside an artery—it ought to be treated with caution. MM. Sanson and Begin, in their excellent treatise on *Médecine Opératoire*, lay it down that we should *almost never* bleed where the artery passes: for my part, I should say, we ought *never on any account* to open a vein so situated. How often have I denounced the practice of bleeding over the brachial artery! I have constantly inculcated the propriety of choosing any vein but the one which is there placed. Even where the fold of the arm affords no other sufficiently eligible, I recommend bleeding in the fore-arm, or even the hand.

Injury of the brachial artery by the lancet may occur in different ways. Sometimes the instrument meets the artery and vein at a point where these vessels are not exactly in juxta-position, and there is presently an effusion of blood. Again, they form a communication by the wound, and an *arterioso-venous* aneurism is the result, or a *varicose* aneurism, as it is sometimes called; because in this case the vein is dilated by blood from the artery. This kind of injury differs essentially from the others that may be traced to the same cause.

The following is the case of false aneurism which has more immediately given rise to the preceding remarks. We have met with it within the last few days in the *consultation publique*.

Case I.—*False Consecutive Aneurism of the Brachial Artery, from Venesection.*

A man, aged about 40, of a good constitution, was bled about two months ago by a midwife, who pierced both the vein and brachial artery. The blood immediately spouted out with violence, and it was of a bright red colour. When a jet takes place from a vein, it seldom exceeds one or two feet, rarely three; but when an artery is opened, the jet is much more energetic; we sometimes see it carried to the distance of five or six feet, often reaching the ceiling or the opposite wall. The mode too in which the fluid issues is characteristic; it comes in jerks, not in the regular stream that marks the venous flow in general. It may happen, however, that this peculiarity of the issue depends on the vein being placed immediately over the artery; for, in this case, the movements of the latter may be communicated to the vein, and at first sight it may seem that the artery is opened. Several years ago I was called upon, in great haste, by a distinguished physician, who had just bled a patient. Seeing the blood come out in jerks, he thought the artery was touched; but I presently recognized the mistake, although the gentleman, even to this day, is persuaded that the artery was injured. It would appear that, in the case under consideration, the midwife was aware of the mischief she had done, for she employed strong compression on the part, and applied a very tight bandage. The patient felt the parts benumbed, and found his fore-arm and hand swollen, owing apparently to the bandage; he also perceived the existence of a considerable ecchymosis, caused by the effusion into the cellular tissue; but there was no tumor immediately formed. The puncture in the artery was apparently very minute, and the compression must have closed it. But in about three weeks the aneurismal tumor made its appearance: at first it was very small, and marked by movements of dilatation and contraction, synchronously with the pulse. In the course of four weeks it was about the size of a pigeon's egg. On examining it, one half was found prominent, while the other was buried in the substance of the arm.

But how has the tumor been formed? When an artery is punctured, as by a lancet, the margins of the wound may be brought into contact by compression; but as soon as the latter ceases, and the patient proceeds to use the limb, the effort of the blood throws open the wound again; it infiltrates, and pushes before it the lamellæ

of the cellular tissue, which thicken and form a pouch: the pouch grows apace, communicating all the time with the artery by the small aperture. This is exactly what happened in the case before us: the blood was at first compressed,—then it made an effort,—a pouch was formed,—it presently grew large, and all the characters of aneurism are now before us. If you notice the tumor with attention, fixing the eye steadily on a particular point, you will observe a movement of dilatation and contraction; and if you lay your finger on its summit, you feel it alternately raised and lowered. When the arm is bent, the movements are very visible; but when the fore-arm is firmly extended, the movements are not by any means so visible. It was thought formerly that these two signs infallibly proved the presence of aneurism; but we now familiarly know, that the mere vicinity of an artery is often sufficient to give rise to them,—and still more so, if the tumor be situated over the track of the vessel; so that suspension of the movements on the occurrence of compression, is not a positive sign. If we proceed to examine the patient, we find that the tumor is pointed, and that the integument at the point is exceedingly thin. A slight inflammation in this place would give reason to fear that an opening might ensue, attended by a fatal hæmorrhage. In order, then, to prevent so grievous an accident, we must adopt some prompt and efficacious method. Compression has been already tried without effect: besides, this mode of treatment is tedious, and may lead to gangrene; and in the present instance, it is inapplicable, on account of the wasting of the integument. Ligature is the proceeding that remains to be adopted. Now, in applying the ligature, in what way should we proceed? It would be undoubtedly the more secure plan to use two ligatures, one above and the other below the wound,—because in this way we avoid the communications which are sometimes formed when Anel's method is employed. But this operation involves several serious inconveniences. In fact, when we have suspended the circulation in the part by compression, we have then to cut through the integument along the tumor, to open the sac, empty it, find the aperture in the artery, (which is frequently no easy matter;) then tie the artery, without including the nerve, which is difficult enough, owing to the flow of blood from all parts. Even supposing the operation achieved as successfully as possible, the extensive wound in the integuments may occasion a phlegmon. The flow of blood, I have said, may much embarrass the operator: this is a point of so much importance as to deserve a few moments attention. In the course of any operation, we are almost always sure of being able to suspend the course of the arterial blood by compression: this, however, is not the case in regard to the venous blood; simply for this reason: in the former case, the compression acts on a single vessel; in the latter, it should act on a multitude of different branches at one and the same time, in order to be effectual.

Since, then, the applying a ligature to both ends of the artery, although more certain, is tedious and troublesome, and often very difficult, we may with reason have recourse to the method, which consists in applying a single ligature above the tumor. This method is much less troublesome than the other, for we avoid by it the infiltration of blood, and the greater part of the obstacles just alluded to. It is accordingly this process which is most commonly employed in the greater number of cases: yet we should not omit to add, that when it is applied to arterial parts which have numerous anastomoses, it fails. This is particularly observed to be the case in aneurisms of the primitive carotid and its divisions: the ligature placed below the tumor puts a stop to the pulsations in it at first, but they soon reappear; and the same thing may occur at the fold of the arm.

The reason why we have established a distinction between simple false aneurisms and those of the arterioso-venous sort, is, that in the former, the method of Anel arrests the pulsations, while, in the latter, it has not the same effect.

We shall now briefly describe the part which is the seat of the disorder. The arm is composed of several layers, in the following order:—first, (proceeding from without inwards), we find a smooth envelope, and then a fatty cellular layer, pervaded by a great number of lymphatic vessels, veins, and superficial nerves: a third layer, common to the whole contour of the arm, is composed of brachial aponeurosis; more deeply there are three sheaths, the outer and upper of which, as well as the posterior, belong to different muscles: the third, the most important in our present inquiry, is common to the biceps, placed superficially—to the coraco-brachial and anterior brachial, placed beneath; while between them is perceived the external cutaneous nerve, which pierces the coraco-brachialis above. At its outer and inferior side, this sheath contains the trunk of the radial nerve and an arterial branch: at its inner side, along its whole length, it embraces the humeral artery, with its two attendant veins, along with the median nerve, the relations of which to these vessels are of the highest importance: above, this nerve is external; in the middle, it is anterior; and below, it is internal. Thus, we must seek the artery above, inside the median nerve, and out-

side the cubital: in the middle, we must avoid, with the greatest care, to touch the median nerve, which the artery crosses in passing one time in front and another time behind. Below, we must constantly seek the artery outside this nerve, the cubital having now no longer any relation to it. Lesion or ligature of this nerve would entail a numbness or palsy of the limb. The internal edge of the biceps is also a good director in finding the brachial artery for ligature. On opening the sheath of the biceps, towards its inner part, the artery is at once perceived in all its relations to the median nerve.

In performing the operation, the patient was put in a horizontal position on a bed —the arm semiflexed; an incision, three inches in length, was made towards the lower and inner part of the arm; the skin, cellular substance, and the aponeurotic layer, were successively divided. Upon reaching the sheath of the vessel, the operator opened it with forceps and bistoury, but not above two or three lines. He then slid beneath the artery the flexible silver sound, by means of which he conveyed the ligature. On moderately tightening the latter, the pulsations ceased; but returned again, when loosed a little. Certain now that all was right within the ligature, he tied it definitively with two simple knots. The patient did not murmur during the operation, which was an assurance that the nerves were safe; and it may be added, that the man was encouraged by being shown an individual who had been perfectly cured by a similar operation.

Case II.—*False Aneurism—Compression and the Ligature compared.*

A hawker, about 32 years of age, of a strong, dry constitution, being bled for violent headache, had the brachial artery opened along with the vein in the operation. The surgeon who bled him perceived the accident—the bright red blood—the jerks; yet he allowed the blood to flow till syncope appeared to approach. He then attempted to effect such a compression as would prevent further hæmorrhage, and conjured the patient to be sure the force was kept up, though he did not acquaint the man with the nature of what had happened. The puncture of the vein cicatrized; and the patient, not knowing that he had any thing to fear, left off the compress: a tumor presently made its appearance, and grew larger and larger every day.

On coming to the Hôtel Dieu, the tumor was as large as the closed hand, with all the characters of its aneurismal nature. But from a close examination of the symptoms, it was inferred that—1st, the opening in the artery was not large; 2d, that there was a defect of parallelism between this opening and that of the aneurismal sac; 3d, that the tumor received its blood only from one quarter; and, 4th, that the greater part of the blood contained within the sac was coagulated, and consequently that a well-managed compression would suffice to effect the cure. Compression was accordingly employed, and assisted by the action of ice; but as there was not much visible benefit derived from this method, the operation was agreed on at the patient's request. It was performed in the amphitheatre, the patient sitting in a chair facing the spectators, and the professor placed behind the arm affected. The several steps of the operation were like those of the preceding case; but the patient having fainted when the ligature was applied, and about to be partially tightened, it was necessary to wait till he rallied again, lest the nerve might have been inadvertently included. A simple dressing, with cerate, charpie, compresses, and a general bandage, was applied: the patient was then put to bed. No remarkable accident happened in the after treatment, except the occurrence of slight erysipelas, which was presently subdued. On the tenth day the ligature came off, and there was no hæmorrhage whatever. The pouch was opened; the clots were removed; suppuration took place; and the wound diminished daily. In about two months the patient went out perfectly cured.

It may probably be asked whether forced extension of the arm, kept up for some time, and assisted by ice and compression, would not have rendered the operation superfluous? Continual extension would, in the first place, have been very fatiguing and painful: it might produce anchylosis—a most serious inconvenience. Compressions with ice would no doubt have done much good, but they should be employed for a considerable time; and it must be allowed that they would not be unattended by danger. It is worth observing, that we have no instance of gangrene supervening in any case after ligature of the brachial artery, unless where the nerve has been tied. The most common accident after this sort of operation is the recurrence of the circulation in the tumor: when this has happened, it is necessary to tie both ends of the artery.

Case III.—*Vein transfixed and Artery punctured—Aneurism—Operation.*

A young man, 22 years of age, a porkseller, was bled by a medical man in the median basilic vein. The operator crossed the vessel from side to side, and punctured the artery: bright red blood issued forth, and spurted to a great distance. Perceiving the mischief that was done, the operator, having taken the requisite quantity of blood, was anxious to apply a steady compression on the wounded point. The

hæmorrhage was at first arrested, but it did not fail presently to begin anew. The patient became uneasy, and presented himself at the Hôtel Dieu, where he was taken in. In nine days from the accident, the tumor had attained the magnitude of a nut: it was soft and fluctuating, and presented pulsations isochronous with those of the heart; and there were movements of expansion and contraction observable at the fold of the arm. On compressing the artery above, the pulsations ceased: they, on the contrary, were increased when compression was made below. The existence of aneurism was thus well established. The wound in the vein being well, there remained nothing to shew that it communicated with the artery. Ligature being considered the best mode of proceeding, it was performed next day. The patient was kept in bed, his arm in a state of supination. An incision, two inches and a half in length, was made above the fold of the arm, and along the course of the brachial artery. The subcutaneous cellular tissue was found infiltrated with blood; the fibro-cellular sheath surrounding the median nerve and the brachial artery was dense and thick, but easily lacerable; a very large vein, which ran across the incision, was divided. The sheath was opened, and the ligature passed, as it seemed, between the nerve and artery, by means of the canuletted sound and needle-formed stilette. But the patient suffered a sharp pain and a numbing sensation when the ligature was tightened, which shewed that the nerve was not free. This led to a new search, and a re-adjustment of the ligature. The pulsations ceased: no pain was felt on its being tightened the second time. Sticking-plaister, charpie, and bandage, as before.

No accident occurred during the after treatment. The forearm preserved all its temperature and natural colour. On the third day pulsations began to be perceived in the radial and ulnar arteries, but none in the tumor. On the tenth day the ligature came off, and the wound was nearly entirely healed: one angle of it only discharged a little healthy pus. On the nineteenth day the patient was able to leave the hospital, perfectly cured.

Here, then, was another successful instance of the benefit of a single ligature between the injury and the heart. However, we are not always so fortunate in managing so easily this dangerous affection: in a great number of cases it becomes necessary to tie both ends. The following case, which occurred in my private practice, will serve for an example:—

Case IV.—*Wound of the Radial Artery—False Aneurism—Two Ligatures applied.*

An envoy from Brasil, who arrived not long since in Paris, while mending a pen, and cutting the nib on his thumb-nail, let the knife slip out of his hand. It was thrown upwards several feet, and then came down perpendicularly on the anterior and exterior surface of his left arm, as it lay on the desk. The blade was very sharp: it pierced the skin and subjacent parts, and opened the radial artery. An abundant hæmorrhage took place. A surgeon, who was immediately called in, recognized the injury. Hoping to succeed in treating it by compression alone, he methodically applied compresses and a roller from the tips of the fingers to the seat of the lesion. His appareil remained undisturbed for several days, and there was no hæmorrhage during the time. When it was at length removed, to the surprise of all parties, the wound in the integuments was completely well; but meantime an aneurismal tumor was formed, which, however, it was hoped to keep down by persevering in the bandaging system; but the hope was vain—the tumor grew larger every day. I was called in, and I thought it right to propose ligature of the artery, to which the patient consented. It was done. One ligature was used, and the moment it was applied the tumor ceased to beat, as did also the radial and ulnar arteries. The wound was dressed; but scarcely was the dressing finished, when the circulation was re-established in the lower parts of the arteries just mentioned, and the tumor began to pulsate very distinctly. Another ligature was now applied below the tumor, when the pulsations ceased altogether. In about a fortnight the patient was quite well of his double operation.

Case V.—*Operation with a single Ligature where there was a Hæmorrhagic tendency—Remarks.*

A wine-dealer, aged 45, of good constitution, but subject to hæmoptysis, had himself bled by his medical adviser. The lancet was scarcely withdrawn from his arm, when the blood spouted in arched jets. Strong compression was immediately tried, but without success; and in the course of a month, when the patient came to me, he had at the bend of the arm an enormous tumor. The operation was imperiously required, and it was practised at once. The moment the ligature was applied, the pulsations ceased in the tumor; some persons, however, fancied they perceived feeble pulsations in the radial artery. The night after the operation the patient had a violent attack of hæmoptysis, which rendered it necessary to bleed him twice. By the way, it is not rarely observed that, after the ligature of a large arterial trunk, symptoms of plethora and hæmorrhagy are present; there are some-

times palpitations, uneasiness, temporary defect of sight, and oppression; sometimes epistaxis, hæmoptysis, &c.; but almost always in these cases, one or more bleedings have the most beneficial effects. In this man it was remarked that pulsations were very rapidly perceptible in the radial artery, in consequenee, no doubt, of the state of the capillaries; in the tumor, however, they never re appeared. This circumstance ought probably to be attributed to the existenee of a clot between the artery and the tumor. But there is enough in the case to warn us to be prepared for the recurrenee of pulsations in the tumor, where the anastomoses are numerous, and the circulation is soon restored to the vessels in which it had ceased. The patient in the present ease was happily not in the predieament alluded to; he got well rapidly, and left the hospital about four weeks after the operation.

I shall eonclude with an observation to which I attach some importance—namely, that ligature of the arteries, when it is effected above their lesion, is almost always suceessful when that lesion is recent, and when the margins of the opening in the vessel are fresh, and disposed to unite; but that this operation presents far fewer chanees of success when the lesion is old, and the margins cicatrized and ineapable of adhesive inflammation. Ligature of the upper end of the artery suffiees in the former case, whether the centre of effusion be in communication with the external air or not; but nothing less than ligature of both ends will be suffieient in the latter. There is no exception to this rule, unless where the artery which is injured lies at the very extremity of a limb; its numerous and varied communications then render ligature of both ends indispensible. And the theory whieh this rule comprehends, seems to me to explain certain facts which have hitherto appeared difficult to be accounted for.

A DETERMINED IMPOSTOR.

In the course of last summer M. Dupuytren was called upon to examine a person who stated that he had been set upon by assassins, in the Bois de Boulogne: but he turned out to be an impostor; and M. Dupuytren, in making some remarks on his case, related the following aneedote:—

One evening as Napoleon was walking in the park of Saint Cloud, a young man rushed precipitately out of one of the thickets which terminate the principal avenue, and cried "Thieves! murderers! Save the First Consul!" He fell senseless near the group that surrounded Bonaparte; and two wounds were found upon his person, which bled copiously. When he revived, he mentioned that he was a student; he had been walking in the park, he said, when he happened to light upon some eonspirators who were in ambush awaiting the moment to assassinate the First Consul: he broke in upon their retreat, and thus became the victim of his loyalty. The gates of the park were closed in a moment; search was made in all quarters for the assassins, but in vain. The young man persisted in his story; he was examined and cross-examined without deviating in the least in any of his details. It was about fifteen years after, that he confessed he inflicted the wounds on himself.—*Annales d'Hygiène.*

NEW MEDICAL WORKS.

Illustrations of Cooper's Surgieal Dictionary. By W. P. Coeks, Surgeon. No. 42. 8vo. 2s. sewed.

The Dublin Journal of Medieal and Chemical Seienee. No. 13. 8vo. 3s. 6d. sewed.

Observations on the Uleerative Proeess, and its Treatment, partieularly when affeeting the Leg. By W. Eeeles. 12mo. 3s. 6d. boards.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Feb.* 25, 1834.

Abscess	1	Heart, diseased	3
Age and Debility	54	Hooping-Cough	15
Apoplexy	9	Inflammation	35
Asthma	22	Bowels & Stomach	3
Cancer	2	Brain	4
Childbirth	6	Lungs and Pleura	15
Consumption	60	Insanity	4
Constipation of the Bowels	2	Liver, diseased	8
Convulsions	34	Measles	9
Croup	3	Mortification	2
Dentition or Teething	12	Paralysis	5
Dropsy	17	Small-Pox	3
Dropsy on the Brain	7	Spasms	4
Dropsy on the Chest	3	Stone and Gravel	1
Fever	11	Venereal	1
Fever, Scarlet	8	Unknown Causes	114
Gout	1	Stillborn	31

Increase of Burials, as compared with the preceding week . . . 265

NOTICES.

We are requested by Mr. Grantham, of Crayford, to thank Dr. Dunsford for his politeness towards him. We think our readers probably understand Mr. G.'s views on fractured patella sufficiently well from his communications already published.

S. Y. would have us do what we think rather an unreasonable thing—to print his letter, containing assertions, without proofs, against a gentleman whose discoveries are before the world, and open to all free and fair diseussion. If, however, S. Y. will write us a letter, bearing his real signature, we shall publish it, even though it contain only his opinions.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 8, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XXII.

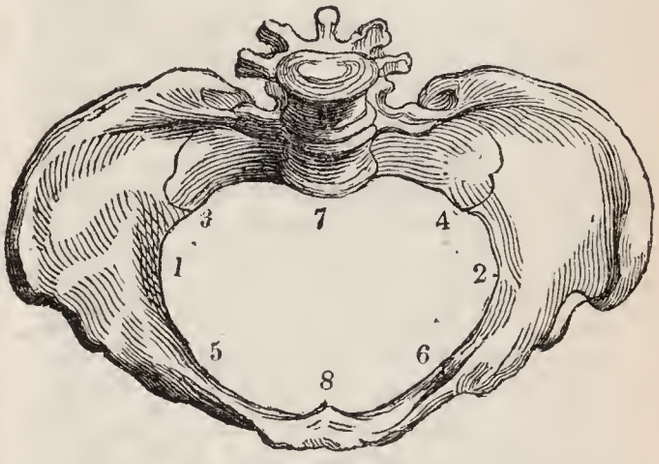
LABOUR.

NATURAL LABOUR.

We resume to-day the subject of *natural labour.*

Recapitulation.—We learned at the last lecture that all labours might be conveniently divided into three stages; that the first terminated with the dilatation of the os uteri, and the rupture of the membranes; the second with the birth of the fœtus; and the third with the expulsion of the placenta. We learned that the first stage is generally the longest, the most tedious, and the most distressing to the patient; that the pains in the first instance are short, occur at long intervals, and are slight in intensity; and that they naturally increase, both in power and frequency, as the labour advances. We learned it was desirable that the membranes should be allowed to rupture of their own accord, and that they should be preserved entire, if possible, until they had performed the whole of their office,—that of dilating the os uteri, the vagina, and the external parts.

We also learned, that the head presents in the great majority of cases, and that the vertex is usually the most depending part;—that there is a great variety of positions in which the cranium might offer at the brim, as, for instance, with the face to the right or left ilium;—to the right or left sacro-iliac synchondrosis;—to the right or the left groin;—looking directly back towards the spinal column, or forwards to the symphysis pubis.



The figures indicate the direction of the face in the different positions of the head, described in the last lecture.

I also mentioned, that it was wisely ordered by nature, both that the vertex should be the presenting part, and also that the face should be inclined backwards; because the head will pass through a much smaller aperture, if the vertex be placed downwards, than if any other part offer itself;—it is also better adapted to the passage through which it has to traverse, and altogether occupies less space, when the face is directed backwards, than when it turns forwards.

Phenomena observed during the second stage.—When the mouth of the womb is entirely dilated—whether that occurrence have taken place previously to, or after the rupture of the membranes—it becomes as it were obliterated; the vaginal and uterine cavities form one continuous canal, and the division between them is not easily discernible until after the child's expulsion. The discharge of the liquor amnii is usually followed by a respite from pain, of longer duration than had been experienced for some time before; but when the ute-

rine contractions return, they are mostly increased, both in length and strength; they are more forcing, and are attended with bearing-down efforts of greater or less violence. Under these expulsive throes, the pulse, which was quicker than ordinary during the first stage, becomes even more accelerated; there is increased heat of skin; and soon a copious perspiration breaks out; the mouth often becomes parched; the breath is held in; and those voluntary muscles, whose action assists the uterus, are called powerfully into requisition, to aid the uterine energies. The patient tightly grasps whatever can give her steadiness and support, places her feet against some unyielding point, suspends her respiration, and strains with all her might. Although the pains during the progress of the second stage are stronger than in the first, still the intermissions are more decided, and the intervals of ease longer; they are endured with more composure and fortitude; and the woman usually slumbers between each paroxysm, even although she had been unable to sleep earlier in the process, in consequence of her irritability or anxiety. This inclination to dose should be indulged, as it both keeps the mind in a quiet and calm state, refreshes the spirits, and restores the bodily powers. At other times, from the moment the liquor amnii is evacuated, the efforts of the uterus become redoubled, as though some fresh excitement was applied. This, indeed, may probably arise from the os uteri being irritated more by the bony head than by the soft cushion previously interposed between itself and the presenting part.

After the escape of the liquor amnii, the fœtal body is more or less compressed, in proportion to the uterine exertions, and the resistance offered by the passages. It is therefore folded into lesser space, and the chin is directed more forcibly against the chest, so that the neck is bent more into a curve.

Progression and recession of the head.—I have before mentioned, that the membranous bag, while entire, is tense, and protruded during each pain; that it becomes lax, and the water recedes, when the pain goes off. The same thing also happens with regard to the head, so far as protrusion and retrocession are concerned. Even after the membranes are broken, we find that the head, with each pain, is forced a little downwards; and in the absence of pain retreats sometimes to a considerable extent. This is particularly remarkable when the head is passing through the outlet of the pelvis. We shall very frequently perceive, especially in first labours, that it is almost entirely expelled when the pain is urgent; but when remission occurs, it again recedes, and is perfectly withdrawn within the parts; and to such an extent has this been observed, as to have given those not well acquainted with the process an idea that the uterus had ruptured, and that the child's body had passed partly into the abdominal cavity. Here, again, we cannot help remarking the beauty of nature's ordinances: it is impossible, indeed, to contemplate a single provision, even of the minutest character, adapted to the exigencies of gestation and labour, without being fervidly and awfully impressed with the extent of that wisdom, power, and benificence, which established the laws, and controls their operations.

The advantage of this retrocession consists in the removal, for a time, of that distending pressure which obtains when the head is propelled downwards. If there were to be a constant urging forward, without the least relief to the parts, throughout the progress of the labour,—even under the most common natural ease, in which not more than the usual time was consumed,—the soft structures must suffer very considerable injury; the vessels must be more or less strangulated; the circulation would be suspended or impeded; inflammation would almost be a necessary consequence; and gangrene would generally follow. We are therefore to hail this recession of the head in its progress through the pelvis as a fortunate occurrence for the woman; since it relieves her from present pain and future danger. It is also to be regarded as a good sign, inasmuch as it proves that the cavity of the pelvis is tolerably capacious.

Turning of the head.—When the head, then, has entered so low into the pelvis that the forehead and occiput impinge respectively on the internal surface of the tuberosities of each ischium,—inasmuch as the long diameter of the head, while in this situation, is opposed to the short diameter of the pelvic outlet, and exceeds that diameter by half an inch,—it is impossible for it to escape in that direction. A change is consequently effected: the face is thrown into the hollow of the sacrum, and the occiput under the arch of the pubes. And I must again insist that this turn is not voluntary on the part of the infant, but entirely mechanical, and depends on the resistance met with by the head in its progress through the passages; the inner surface of the ischial bones,—which somewhat approach each other as they descend,—and the spinous processes of the same bones affording an inclined plane, along which the head may be directed; the hollow of the sacrum offering an unoccupied cavity into which the face may be received; and the arch of the pubes an aperture, through which the occiput may, with-

out much difficulty, insinuate itself. The moist state of the vagina, also, lubricated by its own mucus, by the gelatinous secretion poured out from the glands of the os uteri, and by the liquor amnii but recently discharged, tends in no small degree to further the natural inclination of the head, and facilitate its turn. Some practitioners, indeed—among whom I may mention my esteemed friend Dr. Thatcher—suppose that the muscles situated within the pelvis—the pyriformes, the obturatores interni, and the coxygei, tend in no inconsiderable degree to give the head its proper inclination. For my own part, I think the change in situation sufficiently accounted for by the more simple application of mechanical principles.

It must be borne in mind, that this alteration in position does not commence until the head is fully lodged within the pelvic cavity.

Compression of the head.—We also remark, —especially in first labours, or any case where there is much resistance,—that the head, from pressure, assumes somewhat of a conical figure, the bones of the cranium overlapping each other, so as to diminish the lateral diameter. In consequence of this decrease in volume, the scalp becomes corrugated, puckered at the vertex into three or four folds, very evident to the touch, and observable, *cæteris paribus*, in the same degree as the head is compressed. Pressure to such an extent is seldom injurious. After a time, however, when the head has remained long within the pelvis, and especially if it be impacted, this corrugated feeling of the scalp disappears; and instead of it, we observe a soft puffy tumor in the same situation, to which I shall hereafter have to call your attention more particularly.

While the head thus continues in the pelvis, both before and after its turn is effected,—being compressed by the pelvic bones, and reciprocally exerting equivalent pressure on the soft structures within the cavity,—another most distressing symptom arises, bringing with it great increase of suffering, but not generally interfering with uterine action, or retarding the progress of the labour;—I mean cramp, of the most violent character, affecting the calf and sole of the foot. This is consequent on the compression to which the great sciatic nerve is exposed at this stage of the process; and is so painful that the patient cannot restrain her screams.

Exit of the head.—The vertex, then, of all the cranial surface, first appears externally, being protruded with each pain, and receding when the pain goes off; so that in the interval the head is again received entirely within the pelvis. Another pain causes a farther protrusion of the head: the labia now become opened; the anus dilated; the perineum distended, heated, and very much thinned; so that it feels almost like wet vellum. In this plate of Smellie's, you observe the extended perineum well displayed: and you see that the inner membrane of the rectum is in some degree exposed to the hand when applied to the perineal tumor. This exposure is not injurious: no harm arises from it; and sometimes the dilatation occurs to a greater extent than is represented even here.

In this way, retreating when the pain goes off, and advancing when it returns, the face sweeps along the sacrum, coccyx, and perineum; the chin slowly recedes from the chest; the occiput turns up under the arch of the pubes; the perineum slips back over the partially extruded face; and the head is by degrees expelled. During the passage of the head externally, the pains are even more forcing than have yet been experienced: the woman bears down more strongly, makes a greater effort, and calls forth the utmost power of the abdominal muscles and diaphragm, to aid the uterine contractions. It appears as if all the vital energies were directed towards the accomplishment of the object nature has in view: most of the muscles of the body participate in the general struggle; a violent trembling, which it is impossible to control, frequently pervades the whole frame; and at the moment the head emerges, a piercing shriek will mostly escape the patient, as though involuntarily. When the head is on the point of passing, the contents of the rectum are usually squeezed out; and on its entire protrusion, the perineum, again, from its own elasticity, recovers its former size and appearance; it is collected round the neck of the child,—the woman is completely relieved from the distending force, and consequently from the agony she endured. She will now generally express some strong sentiment of gratitude and joy; or perhaps her feelings will only find utterance in tears.

Under all states of the system, the sudden removal of intense pain brings with it a sensation of positive pleasure; and in no case is the instantaneous transition from extreme misery to actual joy more conspicuous than immediately on the delivery of the head, especially if it be a first birth;—to which, indeed, the preceding remarks are more particularly applicable. A longer interval of ease follows the expulsion of the head than had occurred since the perineum first began to be extended. In a very few minutes, however, action is again established, for the purpose of completing the delivery.

Exit of the body of the child.—You will observe, that after the head has effected its

turn, with the face into the hollow of the sacrum, and is passing through the outlet of the pelvis, with its long diameter in the same direction as the long diameter of the inferior aperture,—namely, from the fore to the back part,—the shoulders are at the same moment entering the cavity, and passing through the brim, with their long diameter in the same direction as the long diameter of the superior aperture, which is from side to side; so that the child is here adapted, both as it regards its head and its shoulders, to the pelvis, in such a way as to make its transit the most easily. After the head is born, however, when the shoulders have come down to press upon the outlet of the pelvis, their long diameter is opposed to the long diameter of the outlet, and they seldom can make their exit in this situation, unless the child be small or ill-formed: but most usually they also effect a turn, similar to the turn already described by the head; one of them being directed into the cavity of the sacrum, and the other insinuating itself under the arch of the pubes. Through the outlet of the pelvis, then, the child is expelled sideways, one shoulder and arm distending the perineum, and the other offering itself anteriorly. One pain may be sufficient to effect this turn and expel the shoulders; or two or three may be required. When, however, the fœtal body is so far protruded that the parts are again distended, the patient again experiences pain; not such violent agony, certainly, as when the head was being expelled, but the same feeling of forcible distention;—the same sensation as if the parts were being rent. A short time only elapses before the uterus again acts, to expel the breech; the child in the interval remaining half born, the perineum somewhat on the stretch. As the breech takes up less room than either the head or shoulders, it is usually extruded with slight exertion; the legs and feet either pass directly, or remain a minute or two in the vagina, and are ultimately expelled by the vaginal fibres: the birth of the child is then perfected, and the second stage of the labour brought to a close.

Varieties in the time occupied by the passage of the child.—The time occupied by the passage of the child, after the rupture of the membranes, is as uncertain as the period required for the dilatation of the os uteri and the accomplishment of the first stage. Sometimes the same pain under which the membranes burst, expels the head, and perhaps the body also; at others, very many hours of wearying suffering are sustained before the head emerges; and the same uncertainty with regard to time applies—but in a very limited degree—to the passage of the shoulders after the head is born: sometimes scarce a moment intervenes, sometimes a considerable space; but usually the child is entirely expelled within five minutes after the head has passed.

Symptoms of a speedy termination to the labour.—The symptoms of a speedy termination to the labour are, that from the beginning we should find the os uteri lax, soft, thick, moist, cool, and not tender; that we should find the vagina also soft, moist, relaxed, and cool, and the perineum easily distensible; the pelvis well formed; the head directed with the face laterally, or looking diagonally backwards, with the vertex downwards. With such indications, if the woman be in good health, and the pains pretty active, we may expect a speedy termination to the case.

Symptoms of a tedious labour.—The symptoms of a tedious labour are exactly the contrary of those I have just mentioned:—that we should find the os uteri thin, hard, unyielding, dry, and tender, and feeling round the presenting part of the head as if a cord were tightly encircling it; that the vagina and perineum should be dry, hot, narrow, and constricted; that the head should be wrongly placed; the pelvis small; or the uterine action feeble: any of these features displaying themselves, will indicate the probability of a protracted struggle.

In general we shall find that when the os uteri has been rigid, and dilates with difficulty, the perineum and vagina are also rigid, and the labour is therefore tedious from the commencement to the close: but this is not by any means an universal remark; for sometimes the perineum will give way very easily after the os uteri has opened with great difficulty; and in other cases the vagina and perineum will be very rigid, when the os uteri has dilated tolerably easily. It may be set down as a general rule, that the vagina and perineum dilate with the most difficulty in first labours: and this observation is more universally applicable to these organs than to the os uteri. It is not easy to account for this circumstance, except on the principle, which I before quoted from Denman—that parts which have once taken upon themselves an action, or undergone a change, are more disposed to undergo the same change and take upon themselves the same action upon future occasions; or as the same intelligent and judicious writer, not quite so philosophically, remarks, when speaking of the little disposition the vagina and perineum shew to relax, in most first labours,—"that this inaptitude arises not from rigidity only, but, if we may be allowed the expression, from ignorance how to dilate." We very seldom find the vagina or perineum more rigid in subsequent labours than in the first, unless that

rigidity is the consequence of a cicatrix produced by sloughing. It is possible that after a first labour inflammation of the vagina may occur, which may terminate in slough; that slough will separate, the ulcer will heal, a puckering will take place, and a cicatrix will be left; by which processes the capacity of the canal is much diminished, and its dilatability impaired: but this is an accidental occurrence, and must be reserved for future consideration.

THIRD STAGE.

The second stage, then, is terminated on the birth of the child, and the third stage consists in a continuation of the same efforts for the expulsion of the placenta.

Varieties in the time occupied in the expulsion of the placenta. — This stage also varies much in respect to time: if the uterus be vigorous and active, the placenta is generally expelled quickly; but if uterine action had been feeble during the former stages of the process (particularly if the labour had been lingering, or the child had been extracted by mechanical means), a comparatively long period usually elapses before the placenta passes. In some instances, indeed, the uterus does not act to expel it at all, and the introduction of the hand is required for its removal. I have sometimes known the placenta thrown out of the vagina by the same pain that expelled the child. More frequently, ten, fifteen, or twenty minutes, elapse before the placenta is expelled from the uterine cavity into the vagina, and even then it may lie in that cavity for hours before it passes externally. Those contractions by which the expulsion of the placenta from the uterus is effected, are also attended with suffering; not, indeed, nearly approaching the violence of the pains under which the fœtus was expelled, but more like the uneasy sensations experienced during the commencement of the first stage: they are referred principally to the loins and upper region of the sacrum, and are scarcely complained of. It is seldom that one pain expels this mass even out of the uterine cavity; more frequently three or four follow each other, at tolerably regular intervals; and it descends into the vagina by degrees.

When it has passed from the uterus—if the case be left entirely to the natural powers—the muscular fibres of the vagina complete its expulsion; but as this canal has suffered severe and unusual distention during the birth of the child, we cannot expect that the muscular coat can regain its previous tone in an instant, so completely as to embrace the mass firmly and expel it immediately. It consequently remains within the vagina, until the fibres have recovered sufficiently to act upon it. This requires a very different period in different instances: sometimes five or six hours will elapse; most usually it is thrown off within the hour.

Separation of the placenta from its uterine attachment. — Previously, however, to the placenta being expelled out of the uterine cavity, it must be separated from its uterine attachment. This separation is produced exactly by the same action which causes its extrusion—viz. uterine contraction. After the birth of the infant, the general volume of the uterus and the capacity of its cavity being diminished in proportion to the degree of contraction it has undergone, it necessarily follows that the uterine space before occupied by the placenta is proportionately decreased, and shrinks into a less surface.

As the placenta is a perfectly passive body—as there is no power inherent within its own structure, by which its maternal face can be diminished in any degree corresponding with the diminution of the internal surface of the uterus—the very shrinking of the uterine parietes causes the mass to lose its former hold; it spontaneously falls from its attachment, and would remain loose in the uterine cavity, unless extruded by a continuation of uterine action. This simple contraction, then, causing the uterine membrane to slip away from the placental surface, both separates it from its connexion and expels it from its cavity. The placenta passes through the vagina inverted; so that its fœtal face becomes external: the membranes attached to it are also turned inside outwards, and are flapped over its maternal surface.

Loss of blood always accompanies separation of the placenta.—There is always a loss of more or less blood accompanying the separation of the placenta; and this blood appears externally upon the linen. The quantity varies exceedingly; sometimes it is not more than an ounce or two, at others it amounts to some pints, constituting a most violent hæmorrhage. Even after the placenta has been expelled from the uterine and vaginal cavities, the process of uterine contraction does not cease, but continues for the purpose of arresting the flow of blood by the closure of the vessels; for preventing the possibility of inversion of the organ; and for silently and gradually decreasing the bulk of the uterus to its former small unimpregnated state. Should the uterus not contract; in proportion to the flaccidity of its parietes, the distensibility of its cavity, and the perviousness of its vessels, would be the danger of hæmorrhage. I am not prepared to say that dangerous flooding must invariably occur, if the uterus did not contract completely; because it is possible

that coagula might form at the apertures which I have already described as existing in the sides of the uterine veins; and if the heart's action were not powerful enough to dislodge those coagula, the loss of much blood might be by them prevented. But this kind of plug is a most inefficient security against all varieties of uterine hæmorrhage; and no woman can be considered safe from the loss of blood until the uterus is firmly, entirely, and permanently contracted. It is most desirable, then, that the uterus should continue to contract even after the expulsion of the placenta,—to prevent hæmorrhage by closing the open vessels, to prevent the possibility of its being inverted, and to restore the uterus to its former small unimpregnated size.

My valued friend, Dr. Merriman, in his excellent work on Difficult Parturition, has given an abridged translation of a case of natural labour witnessed and published by M. Saeombe, of Paris; during which he had an opportunity—however indecorously embraced—of watching by the eye the progress of the different stages; and was enabled to minute with accuracy the accession and duration of each pain. This history, curious of its kind, and almost unique, may be considered a very favourable specimen of parturition under a primary labour; and I recommend it, as divested by the Doctor of much high-flown and fulsome language, to the attention of those of you who may be desirous of consulting such a document.

ON THE RELATION BETWEEN THE IRIS AND PALPEBRÆ;

With an Inquiry into the Functions of their Nerves and those of the Face, and some Remarks on Sir Charles Bell's Experiments and Observations.

By John Walker,

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In a paper which I had the honour to have read before the Philosophical Society of Manchester, and which has since been published under the title of "An Essay on the Physiology of the Iris," I endeavoured to establish a new view of the relations and sympathies of the iris. All preceding theories had assumed that the changes of the pupil are the result of a sympathetic action between the iris and retina, and that these two are related to each other in some manner similar to the ordinary relation between a muscle and a nerve. It is not my intention here to repeat the arguments there adduced; from which I came to the conclusion that the motions of the iris are independent of the retina. I may, however, briefly allude to one or two points; such as the fact that the motions of the iris are often complete when the retina is in a state of perfect paralysis; that the retina is not a nerve, in the ordinary acceptation of that term, but a part endowed with a particular function through its own nerve, the optic; that when the retina is in a state of inactivity, during sleep, the pupil is powerfully contracted; that the iris is, to all intents and purposes, a true internal eye-lid, its actions corresponding with the palpebræ, both being contracted during sleep, both expanding the moment we awake; that the motions of the iris are probably dependent upon this association with the eye-lids, as well as upon its own sensibility to light, &c. To establish its connexion with the palpebræ, I referred to the ophthalmic ganglion, which gives off the ciliary nerves which go to the iris. I pointed out that this ganglion is formed by two nerves, branches of the third and fifth, which are also distributed to the eye-lids, and that consequently the iris and palpebræ are anatomically and physiologically related. I ventured to deduce from these premises, that the sympathies and relations of the iris are with the palpebræ, and not with the retina, as is generally taught and believed. I argued, that the sensibility to light is derived from the fifth pair of nerves, and that, consequently, the eye-ball generally, and the eye-lids, are all subject to its influence; and that the retina is simply the medium for conveying pictorial representations to the brain. Nor can there be any thing more objectionable in this view than in the parallel case of the tongue, which derives its sense of taste, as well as its common sensibility, from the fifth pair of nerves; a fact admitted by all physiologists. But with respect to the motions of the iris, I conceive them to be regulated by the ophthalmic ganglion — that the branch of the fifth pair probably gives it the power of contracting, whilst its dilating property is to be attributed to the third pair. I cannot but consider this as a fair deduction from analogy with the motions of the eye-lids. Anatomists now agree that the iris is possessed of two distinct sets of fibres—

namely, a set constituting an orbicular or sphincter muscle around the pupillary margin, and another set, termed the radiated fibres, proceeding from the ciliary margin. Indeed it is very easy, in the living eye, often to distinguish the two sets of fibres. In one particular instance I have observed the two sets perfectly distinct, with considerable difference of colour in them. I consider, then, these two sets of fibres as two distinct muscles; that they are strictly analogous and related to the two muscles of the palpebræ, and that the sphincter fibres of the iris correspond with the orbicularis palpebrarum, as the radiated fibres do with the levator palpebræ. That their actions correspond is evident: as before intimated, the sphincter fibres of the iris are contracted in sleep, so are those of the orbicularis palpebrarum; when we awake, the radiated fibres have the preponderance, so has the levator palpebræ. In adapting the eye to different distances, the same relation is observed: in looking at distant objects, the pupil dilates and the eye-lids are separated, whilst the reverse happens in viewing near or minute objects.

But it is said, you are endowing the branch of the fifth pair, which goes to the iris, with the power of motion, whilst physiologists assert that it merely bestows sensibility upon the eye. On referring to the anatomy of the fifth nerve, we find that it gives different branches to the iris as well as to the eye-lids. Now we know that the fifth is a double nerve, possessing, or contributing to, two distinct properties—viz. sensibility and mobility. The latter seems to be overlooked in all its branches, except those supplying the muscles of the jaw. It appears to me, in the case of the iris, that this nerve bestows upon it, not sensibility merely, but, as before mentioned, the power likewise of contracting its aperture; whilst the dilating power is acquired through the branch of the third pair. It is worthy of notice, that the iris receives at least two or three branches from the fifth pair; one uniting with a branch of the third, to form the ophthalmic ganglion, and one or two other branches afterwards, which pass with the ciliary nerves to the iris: the latter, it seems probable, for the purpose of bestowing upon it sensibility, whilst the ganglion presides over its motions. It would appear that injury or disease of either nerve would arrest the functions of the ophthalmic ganglion, presuming it to be the regulator of the motions of the iris. In Magendie's experiments, after dividing the fifth, the pupil became dilated and motionless. In Mayo's experiment of dividing the third, the same occurred. Cases have been observed also, of paralysis of the muscles supplied by the third, where the iris was also paralysed and the pupil dilated. Some writers have stated that the ciliary nerves are, in some animals, supplied merely from the fifth, and others simply from the third pair; so that although both are probably essential to the perfect motions of the iris, yet it seems likely that sometimes either alone is sufficient for this end.

The iris is evidently a part of great complexity. I know no better term to describe its varied actions and properties than that of internal eyelid. It exhibits the same phenomena of opening and shutting, and the same sensibility to light and other stimuli, as the true eye-lids. In addition to its two distinct sets of muscular fibres, corresponding to the levator and orbicularis palpebrarum, it possesses a delicate and beautifully variegated lining membrane, in which resides, probably, the seat of sensibility, and which, at all events in the latter point, resembles the lining membrane of the external lids. The general purposes of both are obviously the same.

It has already been stated that the nerves of the iris, or at least branches from the same parent nerves, go also to the palpebræ—viz. the third and fifth. In addition to these, branches are also sent from the portio dura. Now this complexity it is that occasions the difficulty which we find in explaining the various movements of the eye-lids. What are the uses of all these nerves? The use of the third, as connected with the palpebræ, is sufficiently clear: it gives the power of motion to the levator palpebræ; so that the function of this nerve is quite evident, and it is consequently easily disposed of. This cannot be said of the other two. That the fifth nerve, however, gives to the palpebræ, as well as to the eye and face generally, the property of sensibility, seems also indisputable. Are we sure that it does not control some of the motions of the palpebræ, and perhaps of the face? Branches of this nerve, we know, are sent to the corrugator supercilii, fronta-

lis, and orbicularis palpebrarum; as well as to all the muscles of the face. What end can be answered by such a distribution, if not to supply these muscles with voluntary motion? Can we suppose those branches intended to bestow sensibility on these muscles? What good could be gained by endowing them with such a property? They are the instruments of motion, and not of sensation. If the orbicularis need such sensibility, why does not the levator palpebræ require it? and yet nothing is said about any branch of the fifth going to the latter muscle, or to any of the muscles of the eye. So that it seems perfectly reasonable to conclude that the branches of this nerve, which are connected with the muscles of the palpebræ and iris, are intended to supply these muscles with the power of motion, as similar branches do those of the jaw *. But we know, likewise, that branches of the portio dura go to the orbicularis; and then the question is, of what use is another set of nerves to the same muscle? Now whether this is merely to connect the eye-lids with the face, in expression or respiration, or in what other way, does not seem very clear. The portio dura is considered, by Sir Charles Bell, as the respiratory nerve of the face; and, if I understand his theory of the nervous system, he considers the respiratory portion of it perfectly distinct from those parts connected with sensibility and voluntary motion. Now then, if the branches of the portio dura be for the respiratory movements of the eye-lids and face, the inference is, that the branches of the fifth are for their voluntary motions; and yet this is far from being established at present: so that, notwithstanding the great discoveries in this branch of knowledge, effected by Sir C. Bell, something still remains to be done before we can consider our information on these points as perfectly satisfactory.

The motions of the orbicularis palpebrarum are various and distinct—such as the closing of the eye-lids in sleep and by the efforts of the will—an almost continual motion, termed winking — as well as an action in sneezing, laughing, &c.; and it seems not improbable that some of these motions are dependent upon the fifth, and that the others are derived from the portio dura. At all events, it appears reasonable to conclude that both nerves are essential to the perfect motions of the orbicularis—the one probably to connect it with the eye, the other with the face. The union of these two nerves over every part of the face is most intimate: they appear to inosculate with each other, so as to form a kind of plexus; and one would be almost tempted to imagine that injury or disease affecting one might produce a corresponding affection of the other, or rather, might be attended with impaired function of both, as we find to be the case with the union of the fifth and third, termed the ophthalmic ganglion. Experiments, conducted with this view, can alone, perhaps, settle this point. In one experiment, by Magendie, made upon a rabbit, of dividing the fifth pair of nerves, we are told, "the motions of the eye-lids, called winking, had ceased." In similar experiments on other rabbits, "the eye-lids were either separated to a considerable distance from each other, and motionless, or were glued together by the puriform discharge which had dried on their edges," &c. If these experiments do not prove that the fifth has something to do with the motions of the eye-lids, it would be interesting to know what they do prove.

In an experiment by Sir C. Bell, it seems to be established, that certain muscles may be deprived of their connexion with the respiratory system, whilst they continue to possess voluntary motion. This eminent physiologist observes, "I divided its branches (viz. the spinal accessory) in the living animal, and by that means cut off certain muscles from partaking in the act of breathing, while they retained their office under the other nerves; that is, they remained under the direction of the will, when they had ceased to be influenced by the lungs*." The same is expressed elsewhere. "When it is cut across in experiments, the muscles of the shoulder, which were in action as respiratory muscles, cease their co-operation, but remain capable of voluntary actions †." With respect to the nerves of the face, he continues—and this brings us still nearer to the point—"Directed,

* It seems probable, that if the muscles of the jaw had also branches from the portio dura, to the latter alone would be attributed the voluntary motion they possess; but, as it is not so, physiologists are compelled to admit that the fifth is here a nerve of motion.

* Exposition of the Nervous System, 1824. Octavo edit. p. 58.

† Ibid. p. 91.

in the next place, to the portio dura, I wished to answer the question, Why does the nerve which supplies the muscles of the face take an origin and a course different from the fifth nerve, destined to the same parts? By experiment, I proved that this was the respiratory nerve of the face: and by inference, I concluded that it had the origin we see, and took its course with the respiratory nerves; because it was necessary to the association of the muscles of the nostrils, cheek, and lips, with the other muscles used in breathing, speaking, &c. For this reason, it was associated with the root of the eighth pair instead of the fifth." Now, here Sir Charles Bell admits, that the portio dura is the nerve which connects the face with the remainder of the respiratory apparatus; but he has not furnished us with a key to the voluntary action possessed by these muscles, whilst it is quite clear that he considers the respiratory as distinct from the voluntary nerves.

In the same work, just quoted from, is a note, from a paper by that excellent anatomist, the late Mr. John Shaw. He observes, "If we cut a branch of the fifth which is distributed principally to the skin of the lips, we shall destroy the sensibility of the part, but impair the power of mastication only in a slight degree; but if we divide the nerve farther back, then we shall not only destroy the sensibility of the skin, as in the first experiment, but also cut off the power by which the jaws are moved. I cut a branch of the fifth upon the face; the sensibility of the corresponding side of the lip was destroyed, but little paralysis ensued *." Now, here is an admitted fact, that some effect was produced upon the muscles of the lip: true, it says "but little paralysis ensued," but still paralysis there evidently was to a certain extent.

It would seem as if Sir Charles Bell had, at one time, been nearly led to look at the double nervous supply to the face in the way I have now done. He says, "If we were barely to consider this distribution of the portio dura of the seventh, unbiassed by theory or opinion, we should be forced to conclude, that it is not alone sufficient to supply any one part with nervous power, for every one of its branches is joined by divisions of the fifth. The question then naturally arises, whether these nerves perform the same function? whether they furnish a double supply of the same property or endowment? or whether they do not perform different offices *?" Sir Charles then relates experiments which he undertook with a view of illustrating the functions of the two sets of nerves. "An ass being thrown, and its nostrils confined for a few seconds, so as to make it pant and forcibly dilate the nostrils at each inspiration, the portio dura was divided on one side of the head; the motion of the nostril of the same side instantly ceased, while the other nostril continued to expand and contract in unison with the motions of the chest." . . . . . "The animal being untied, and corn and hay given to him, he ate without the slightest impediment." This experiment clearly proves that the portio dura is the respiratory nerve of the face; and it as clearly proves that the muscles of the face can act independently of the influence of that nerve. The animal "ate without the slightest impediment." Are not all the muscles of the face in action during the process of eating? There is not merely the opening and shutting of the jaws, but the separation of the lips, and the general consentaneous action of the muscles of the cheeks. This experiment, in my opinion, proves that the action of the muscles of the face is independent of the portio dura, except so far as its connexion with respiration is concerned. If this nerve had presided over the voluntary motions of the lips, *they would have been found twisted to the opposite side*, as occurred in the next experiment. "The superior maxillary branch of the fifth nerve was divided, but no change took place in the motion of the nostril; the cartilages continued to expand regularly in time with the other parts which combine in the act of respiration; but the side of the lip was observed to hang low, and *it was dragged to the other side.* The same branch of the fifth was divided on the opposite side, and the animal let loose. He could no longer pick up his corn; *the power of elevating and projecting the lip, as in gathering food, appeared lost.* To open the lips, the animal pressed the mouth against the ground, and at length licked the oats from the

* Page 84.

* Page 104.

ground with his tongue. The *loss of motion* of the lips in eating was so obvious, that it was thought a useless cruelty to cut the other branch of the fifth." This experiment proves that the fifth is totally unconnected with the respiratory system. It proves, further, that the fifth is a nerve of motion, as well as of sensation. The lip of the side experimented upon "*was dragged to the other side.*" Will it be said, that this arose from any other cause than the loss of power in the muscles of the lip of the injured side to retain it in its natural position? Could the inability to pick up his corn, and the loss of "the power of elevating and projecting the lip," when the nerve of the opposite side was also cut, arise from any other cause than loss of power over the motions of the lips? As Sir Charles Bell himself says, "the loss of motion of the lips in eating was so obvious, that it was thought a useless cruelty to cut the other branches of the fifth." But, strange to say, Sir Charles, as appears by a note, subsequently altered his views of this experiment, and imagined that nothing more than loss of sensation was here proved. It is painful to differ from so distinguished a physiologist; but do we not daily witness complete loss of sensibility with a perfect state of the motions of various parts? Here, most probably, sensibility and motion of the lips were both destroyed; but certainly I cannot persuade myself but that the motions of the lips were paralysed, whether the sensibility was so or not. The very fact that the lip was dragged to the opposite side, in the first part of the experiment, proves that the muscles of that side could no longer act. What had that phenomenon to do with loss of sensibility? And, if the animal, in the second part of the experiment, could not feel with the lips, still, if it had retained the power of motion, it would nevertheless have been able to elevate and project them.

Other facts are adduced by Sir Charles, which prove not only that the portio dura is the respiratory nerve of the face, but likewise, that it is nothing more. In a monkey, after cutting this nerve, "the timid motions of his eye-lids and eye-brows were lost, and he could not wink on that side; and his lips were drawn to the other side, like a paralytic drunkard, *whenever he shewed his teeth in rage.*" Now what are we to infer from this experiment, but that the animal retained the power of the muscles, except when in a state of excitement, when the whole respiratory system was agitated? Here there is no distortion of the mouth, except when he is in a state of rage. If this nerve had presided over the muscles of the lips at all times, he must have been, at all times, in the condition of the ass in the previous experiment, who had his lips permanently dragged to the opposite side, after division of the fifth. The timid motions of the eye-lids and eye-brows, and the motion of winking, were all lost on that side; but nothing is said about a loss of the ordinary motions of those parts contracting the eye-brows and closing the lids.

A case is next related of "suppuration of the face anterior to the ear, through which the nerve (portio dura) passed in its course to the face. It was observed that, *in smiling and laughing*, his mouth was drawn in a very remarkable manner to the opposite side. The attempt to whistle was attended with a ludicrous distortion of the lips; when he took snuff and sneezed, the side where the suppuration had affected the nerve remained placid, while the opposite side exhibited the usual distortion." Here also it is quite plain there was no permanent paralysis of the muscles—no loss of their voluntary actions—nothing remarkable except when laughing, sneezing, or in some other motion connected with respiration.

Another case worthy of notice is that of "Thomas Barrett, a patient in the hospital, who had his mouth drawn to the left ear; the eye-lids of the right side remain open; but the temporal and masseter muscles retain their power." This likewise is considered by Sir Charles as an instance of disease of the portio dura; but there is this remarkable difference, that the paralysis is constant, whilst in the others it was only observed during some act of respiration, such as whistling, laughing, &c.; and, if we may be permitted to draw an inference from the experiment of dividing the fifth on the ass, this case may be fairly set down as a disease, not of the portio dura, but of the fifth. We are borne out in such inference from what Sir Charles elsewhere says, "In the individual whose face was paralysed on one side during the excited state of the respiratory organs, there could be ob-

served no debility or paralysis in *the same muscles when he took a morsel into his mouth and began to chew;*" so that we are evidently to look to the fifth nerve for the action of the muscles in eating (I presume a voluntary action); and these muscles are not merely those of the jaws, but likewise those of the cheeks and lips.

In attempting to irritate the portio dura, the slightest touch " convulsed the muscles of the face;" whilst in irritating the branches of the fifth, " it was *more difficult* to produce any degree of action in the muscles." This only proves that the respiratory nerves are more easily excited than the common nerves. Had no action of the muscles followed the irritation of the branches of the fifth, then it would have been a legitimate conclusion that they ministered to none; but as an action did follow such irritation, though more difficult to produce, it seems perfectly correct to conclude, that such motion is also derived from this nerve. Indeed, if those motions of the face and eye-lids, which are unconnected with respiration, are not affected through the fifth nerve, then is Sir Charles's theory perfectly upset, since it would prove that the portio dura is a nerve of voluntary, as well as respiratory, motion; which is contrary to what he has advanced with regard to the respiratory nerves generally.

Elsewhere Sir Charles observes, " I have found in an individual, that, when the cheeks and lips were twisted by paralysis, he possessed the power of holding with his lips in a manner that indicated a power independent of the seventh." Mr. Shaw also says of a case, " If told to laugh with the right side, she raises the angle of the mouth, but by an action which is evidently regulated by the fifth."

Almost every page of this part of Sir Charles's work is filled with proofs of this double set of motions of the muscles of the face. He says, " All such affections of the respiratory nerve will now be more easily detected; *the patient has a command over the muscles of the face; he can close the lips, and the features are duly balanced;* but the slightest smile is immediately attended with distortion; and in laughing and crying the paralysis becomes quite distinct." If this does not imply that the common motions would remain unimpaired after injury to the portio dura, I don't know what else it can mean; and yet Sir Charles imagines that, if a surgeon were to cut the branch of the portio dura which goes to the eye-lids, they " thenceforward would stand apart, the eye would be permanently uncovered, and the cornea become opaque, and the vision of the eye be lost." This I believe to be a *non sequitur*. It is contradicted by Sir Charles's previous experiments. The phenomena here predicted would, I think, have followed the cutting of the branch of the fifth which goes to the eye-lids, as occurred in the experiments of Magendie. Several other cases might be extracted from Sir Charles's work, but that I think a sufficient number have already been noticed.

It is the fashion at present to attribute every paralytic condition of the muscles of the face to disease of the portio dura. This is not surprising, when the discoverer of the grand distinction between the respiratory and the other nerves has failed to apply to the muscles of the face the important principle which he has so satisfactorily established generally*.

From observation and consideration of the cases and experiments alluded to, it may be safely inferred that all cases of permanent distortion of the lips must arise from paralysis of the fifth pair of nerves; whilst that twisting which is observed only during laughter, &c. is to be attributed to paralysis of the portio dura. In cases of permanent twist of the mouth, it is very common to find that the sensibility is likewise impaired; in such a case there can be no question but that the disease is to be referred to the fifth.

My object, originally, was to attempt to prove that some of the branches of the fifth pair, which go to the iris, contribute to its motions. I was thus led to inquire into the properties of those branches which are distributed to the muscles of the eye-lids and face: if, in these researches, I shall have assisted in elucidating those points, it cannot be otherwise than a source of considerable satisfaction to myself, and of some slight interest to the profession.

I shall close this paper, already perhaps too long, by relating two cases which I conceive to bear on this question, and which I consider to be in-

* In a lecture published in the Medical Gazette, Feb. 8, I observe that Sir Charles still speaks of the muscles of the jaw merely as deriving motion from the fifth.

stances of diseased action of the fifth pair.

CASE I.—*Sympathetic action of the Eye-lids and Iris.*

Jane Ford, æt. 8, admitted a patient of the Manchester Eye Institution, November 26, 1833, with the following symptoms:—The eye-lids of the left side are spasmodically closed, with a constant twitching motion of the fibres of the orbicularis; and a corresponding action of the orbicularis oris, so that the mouth was drawn *to the affected side;* without any loss of sensibility to touch, or diminution of taste or smell. On separating the eye-lids, the sphincter fibres of the iris were found to be in a similar excited state, the pupil continually contracting and dilating with considerable rapidity (hippus pupillæ), independently of variations of light. She says that she cannot perceive the slightest object with this eye, not even the light. She was ordered leeches, calomel, &c.; and on the 3d of January presented herself quite well.

This affection is considered by Beer as symptomatic amaurosis, arising from hysteria, convulsions, &c. It is difficult to decide whether this was really amaurosis, or whether the inability to see might not be occasioned by the irregular state of the pupil. The age of the girl was unfavourable to obtaining any very correct information; but the symptoms narrated do not admit of misinterpretation, and they could not be imitated. This case I venture to bring forward as an illustration of sympathetic action between the eye-lids and iris. I cannot but consider it as strongly corroborative of the opinions I have advanced on this point, as well as its being an affection of the fifth pair of nerves, although a very different affection from paralysis. At first I was inclined to refer the closure of the eye-lids to paralysis of the levator palpebræ; but from the convulsive action of the orbicularis, joined with the other symptoms, I was induced to alter that view.

CASE II.—*Partial Paralysis of several parts of the Face, from affection of the fifth pair.*

Mr. C., clerk in an assurance office, called on me, November 20, 1833, complaining of disagreeable sensations about the face and neck, with loss of power over some of the muscles of the face, which had commenced on the preceding day, and for which he could not at all account. The affection was confined to the right side. The mouth was drawn to the opposite side permanently, and he complained of diminished sensibility of the side of the face, particularly about the lips. The tongue slightly distorted; the right side of it almost insensible to touch, and the taste very much impaired, so that he could not distinguish bread from beef. When any portion of food gets between the teeth and the cheek of the affected side, he is unable to dislodge it, except with his finger. The winking motions of the eye-lids were imperfectly executed, and he could not close them completely. Vision was unimpaired. One remarkable symptom was an insensibility to the stimulus of light: the eye being placed close to a strong gas light, no irritation was produced, and no attempt at closing the lids was made; but the conjunctiva was sensible to touch. The iris was in this case perfectly natural. He complained of tenderness over various parts of the neck and face, and particularly about the superior part of the spinal column; but had not suffered any pain or giddiness of the head. The application of leeches to the neck, followed by a blister, and the internal use of mercurials, &c. completed his recovery in about a month or six weeks.

February 21, 1834.

OBSERVATIONS ON THE VENEREAL DISEASE;

Being an Extract from the Annual Report of Diseases treated in the Hospital of the 72d Regiment, at the Cape of Good Hope, in 1832.

BY THOMAS CLARKE, ESQ.

[Communicated by SIR JAMES M'GRIGOR, BART., with the Author's permission.]

IT is impossible to come to the consideration of this disease, without being impressed with a sense of its great importance in a military point of view.

When we take into consideration the universal prevalence of venereal disease, and look at the number of soldiers who are admitted into hospital on that account, by which the present and ultimate efficiency of the regiment is materially affected, the necessity is forced

upon us of using our utmost endeavours to check its prevalence, and also to bestow the most attentive consideration in our power upon the mode of treatment.

We have to consider not only what particular mode of treatment is best adapted to the cure of the primary symptoms of the disease, but also by what means we shall be most successful, in preventing the occurrence of those constitutional affections liable to ensue, and by which, in many instances, the constitution of the soldier is prematurely worn out, and the duration of military life shortened.

With regard to the prevalence of the disease, in justice to the municipal authorities it must be said, that no exertion is wanting on their parts to check its propagation, and with considerable success: and with reference to the most beneficial mode of cure, the question resolves itself, in a great measure, into what has been called the mercurial and non-mercurial treatment.

During the four years the 72d regiment has occupied this station, we have had ample opportunity of observing the disease, in almost every form or variety in which it is known to occur; and although the treatment has not been conducted with a view to the production of arguments on either side of the question, yet, perhaps, some useful inferences may be drawn from a concise statement of facts.

For the sake of perspicuity, I think it would be desirable to discard the term syphilis altogether for the present; for, although it has found its way into the return, I would not take upon myself to say, why it should be applied to one sore more than another.

Under the heads, then, of Ulcus Penis, and Syphilis Primitiva, in the Return, are comprehended all primary venereal sores of every description whatever: these may be arranged into certain species, each possessing a character of its own at some time, but not always retaining the same character throughout.

1st. The superficial ulcer either on the external or internal surface of the prepuce, and which is by far the most tractable of any. This sore is sometimes attended with induration of the surrounding substance, and sometimes not. When occurring on the external surface it is rarely attended with induration, but when on the internal surface, it is very seldom found without it. The ulcer is sometimes found single; occasionally several make their appearance, forming a circular fringe on the edge of the prepuce.

2dly. The ulcer on the glans, presenting a variety of appearances, and always attended with excavation, and more or less induration of the edges, it is difficult to heal under all circumstances, and is occasionally found to break out again, even after a lapse of several weeks. This sore generally leaves a well-marked cicatrix, and to it have been traced a very large proportion of the cases of constitutional symptoms which have occurred.

3rdly. There is the phagadenic sloughing ulcer, of which I have observed one case only which can be strictly so designated.

It does not appear to me that any good can result from an attempt to fix upon any one of these primary ulcers in preference to another, the arbitrary term of syphilis. Neither should I be able to say, either from the appearance of the sore, its duration, or its consequences, or any other circumstance attending it, what ought to be called syphilis, and what not. I therefore look upon them all as local ulcers, arising from the application of a certain virus, and all liable to be followed by a certain train of constitutional symptoms.

What this virus is, whether it is one, or many poisons, may be a question; whether it is but one and the same poison, variously modified as to its effects, by the constitution and habits of life of the patient; or a variety of poisons, capable of producing distinct diseases, is more than I can say. This much is certain, that the constitutional train of symptoms, arising from primary sores of precisely the same character, is powerfully influenced and modified by the habits of life and constitution of the persons. Is it illogical then to infer that the primary affection may also be subject to this influence?

The treatment of the primary ulcers has been conducted on the principles already alluded to; that is, a certain number of every variety have been treated with, and without, mercury; and these have not been selected for one mode of treatment in preference to another, from any peculiar character or appearance of the sore, or from any idea that one was syphilitic, and another not; but the different modes of treatment have been applied to sores of a pre-

cisely similar eharaeter, in order that the eomparative merits of the mercurial and non-mercurial treatment might be fairly estimated; not only with reference to the objeet of immediate eure, but also to that of ultimate eonsequenees.

And I may be here permitted to remark, that the result of four years' uninterrupted observation and experience, added to that of former years, is sueh as to satisfy my mind, that every variety of the primary disease which has fallen under my observation, might have been eured without the use of mercury: and further, it is sueh as to ineline me to rejeet the employment of that remedy almost altogether, as being, perhaps, unneeessary in any case, and in many decidedly injurious. I do not mean to assert that eases may not have oeeurred, whieh from some cause, perhaps unknown, may have baffled the best-direeted efforts for their eure: I speak only of my own limited experience.

Of the ineffieacy of every mode of treatment, of the constitutional symptoms of the disease in certain habits of body, I have myself more than sufficient experienee.

I am ready to admit, and to give those of a contrary opinion the full benefit of the faet, that there are some, and perhaps many eases, in whieh mereury will be found to expedite the cure; but this is by uo means universally the case; neither do I think any one eould take upon himself to say in what partieular instanee it will hold good.

Seeing, then, the uncertainty of the benefit, it behoves us to bear in mind that we are handling a dangerous weapon: but eonceding this point as fully as it can be demanded, when we look at the average number of days requisite for the cure, under both modes of treatment, the differenee appears to me very immaterial, and by no means to be put in eompetition with the single fact of the advantage to the soldier, as well as the service, in being discharged from hospital the moment the sore is healed; fit for duty, and his health unimpaired. If then, in point of time required for the eure, there is no great advantage on either side, is there advantage in any other respeet? This gives rise to the question—the all-important question indeed—whether constitutional symptoms more frequently ensue upon one mode of treatment than upon another.

I have not instituted any eomparative experiments, with a view to determine this question, nor do I think that the results of any sueh experiments eould at all be relied upon; but my own expe-rienee authorizes me to say, that constitutional symptoms not only occur less frequently where mercury has not been used (although the difference in this respeet may not be worthy of much eonsideration), but also, when they do oeeur, they are always of a milder eharacter, of shorter duration, more easily and more effectually removed; and, what is a matter of no small importance, with much less injury to the eonstitution, than when that medieine has been employed.

It appears that during the year 1829, being the first year on this station, there were admitted into hospital 96 eases of primary uleers, with and without bubo, and of bubo that had been preceded by uleers, but which had been healed previous to admission. Of these 96 cases, 39 were treated with, and 57 without mereury. During the same period four cases of eonstitutional symptoms occurred, in all of which the primary disease had been treated with mereury.

In the second year 104 cases of the same deseription were admitted; and of these, 40 were treated with mereury, and 64 without it; and constitutional symptoms appeared in six persons, in four of whom the primary disease had been treated with mercury, and in two without it; and in two of those treated with mereury, eonstitutional symptoms appeared a seeond time, making together the eight eases entered on the return.

In the third year there were treated 96 eases of the primary disease, 25 with, and 71 without mercury; and amongst the former, three eases of seeondary symptoms appeared; and amongst the latter, six. In one of the three eases the symptoms occurred for the third time, and in one of the six cases that had been treated without mercury, they appeared a seeond time; and in one ease (making in all 13 entered on the return) was a relapse from the preceding year, in which the primary disease had been treated with mereury.

During the last year 42 eases have been admitted, 12 of whieh have been treated with, and 30 without mereury; of the former, two, and of the latter, ten, were followed by secondary symptoms. In one of the two eases in which mercury had been used the constitutional

symptoms recurred a third time; and in one of the ten in which it had not been used, they appeared a second time; besides which there are five cases (making in all twenty entered on the return of this year) relapses from the preceding year, in one of which mercury had been used for the cure of the primary disease, and in the others it had not.

With this explanation the following table will be understood:-

Years.	Primary Venereal Disease treated		Total.	Secondary Symptoms after Mercurial Treatment.	Secondary Symptoms after Non-Mercurial Treatment.	Relapses after Mercurial Treatment.	Relapses after Non-Mercurial Treatment.	Total.
	With Mercury.	Without Mercury.						
1829	39	57	96	4	0	1	0	5
1830	40	64	104	4	2	2	0	8
1831	25	71	96	3	6	3	1	13
1832	12	30	42	2	10	6	2	20
Total	116	222	338	13	18	12	3	46

It appears from this table, that while the number of cases of primary disease have been progressively decreasing during the last three years, those of the constitutional disease have been progressively increasing. And further, it may be remarked that, on comparing one year with another, a considerable difference appears in the duration of the primary disease, the average number of days under treatment being, in 1829, 23 days; in 1830, 28 days; in 1831, 24 days; and in 1832, 32 days. This being a general average, without reference to the nature of the sores, or the particular mode of treatment, I am at a loss to account for the circumstance upon any other principle than that of a change in the habits and constitutions of the men. There can be no doubt of the fact, that, by the intemperate habits to which soldiers are far too generally addicted, in this climate, their constitutions are impaired to a lamentable extent in a remarkably short space of time; and these causes, intemperance and climate together, operate not only in rendering the local disease more difficult of cure, but also in predisposing the constitution for the accession of constitutional symptoms, which symptoms in every subsequent year appear in a more aggravated form, are more intractable under treatment, and also more liable to recur; besides which, there are peculiarities of constitution, more particularly where the strumous diathesis exists, in which the symptoms are doubly aggravated. We have every day experience of the mildness of character of the symptoms, and the ease with which they are removed, in men of temperate habits; and also the contrary. I am further satisfied also, that in very many instances, but for the circumstance of a deep debauch, or perhaps a march under a hot sun, the constitutional disease might never have been produced.

A sketch of the cases of constitutional symptoms which have been treated during the last year, will illustrate these remarks.

It may be necessary to premise, that in every case of primary disease the patient is strictly confined to bed until the sore is healed, with constant application of astringent washes, such as the solutions of alum, zinc, liquor plumbi, black or yellow washes, and fomentations and poultices where their use is indicated. The diet is always the least exciting hospital diet, until the sore has

made some progress in healing; and a purgative draught is given every second or third day, in the early stage, according to the state of the constitution. When mercury is used, the treatment is not varied, except by its addition.

[To be continued.]

PATHOLOGICAL OBSERVATIONS ON THE SKIN.

To the Editor of the Medical Gazette.

Sir,

It is a matter of curious speculation to note the conflicting opinions of medical authors regarding the seat of cutaneous affections. Even the *existence* of textures, which by some is considered essential to specific disease, is denied by others, and is imputed either to the suggestions of a fanciful theory, or the preternatural appearances assumed by the different tissues in a state of dissolution.

Since the days of Malpighi, the skin has generally been described as consisting of *three* laminæ. Sir Charles Bell, in our day, says *four;* and Mr. Lawrence, Dr. Gordon, and Mr. Plumbe, deny the existence of more than *two*—the *cutis vera* and *tela cellulosa;* the inorganic superficial cuticle being a mere secretion for the protection of the subjacent structures, and in no way concerned in the production of disease.

Seeing, then, these discrepancies in the opinions of medical authors (some of them of no mean reputation), is it to be wondered at, if, even at this period of pathological knowledge, the precise nature of cutaneous affections is not satisfactorily ascertained? Thus we find that by some it is fixed in the true skin, or its superjacent vascular membrane; by others, in the sentient extremities of nerves; and others, again, appoint the precise locality of these affections in the tela cellulosa, or the discarded rete mucosum. Each of these speculative pathologists may in his turn be correct; and, happily for the therapeutical indication, it matters not very materially in which particular texture the affection may reside. The most important question remains. The manifest complexity of the structure of the skin, the diversity of its operation, and its intimate dependence upon the state of the system at large, render it liable to extensive functional derangement. The material change of structure consequent upon various disorders is visible to our senses, but there appears to exist a *disposition* to disease, which precedes this tangible manifestation. How, then, is this prior adaptation acted upon?

Reverting to the exploded humoral pathology, and discarding its manifold absurdities, it appears a rational hypothesis which contemplates the blood as nearly concerned in the production of disease. The laws of the vital properties are involved in impenetrable mystery; but it may be stated in the abstract, that they are engaged in the work of morbid assimilation, by the direct influence of an universally depraved secretion.

It is notorious, that constitutional derangement precedes all extensive cutaneous eruptions. In some cases, nature appears to concentrate her energies, in order to expel a noxious principle; and, concluding from inductive analogy, might we not be led to expect the same phenomena—milder, indeed, in degree—preceding the slighter shades of cutaneous eruptions? The fact is so. The leading features, then, may be thus briefly stated. The stomach, the great centre of agency, is disturbed, and its secretions depraved; the influence communicates, immediately through the circulation, or by direct contiguity, with the liver, and the function of the latter organ is also deranged. The whole course of the alimentary canal suffers, and the blood destined to support the animal and vital functions is more or less mingled with the depraved secretion, loses its integrity, and is converted into an unhealthy fluid. The brain, sympathising, secondarily, by relation with the digestive organs, or by its inseparable connexion with the blood itself, becomes irritated or weakened, and in its turn communicates depraved energy to specific local seats. Hence, acting in concert with an irritating fluid, parts preternaturally weak or irritable assume diseased action, which may be afterwards maintained by a peculiar modification of the vitality of the affected surfaces. From this concatenation of morbid actions, arise, in particular portions of the body, peculiar diseases, manifesting themselves either simply, by a mere change in the elaboration of their secre-

tions, or in more complex operations leading eventually to extensive lesions of the material structure itself.

I have the honour to be, sir,
Your obedient servant,
R. H. Allnatt, M.D.

Wallingford, Feb. 25, 1834.

TREATMENT OF LEPROUS ERUPTIONS.

To the Editor of the Medical Gazette.

Sir,

Those forms of chronic cutaneous eruptions which are usually classed under the designations lepra and psoriasis, are acknowledged, I believe, on all hands, to be difficult of cure; and, so far as I know, there is no remedy hitherto recommended which can be said to be of certain efficacy, or to act successfully in any degree approaching to uniformity. The very various and opposite treatment which we see employed, and the numerous medicaments which have been advised, afford ample proof of the truth of this assertion. The subjoined case illustrates a mode of treatment which I have not seen practised except in this hospital, nor do I recollect ever to have noticed any allusion being made to it in any work on the subject of cutaneous disease. Several instances have occurred wherein the remedy has been attended with distinguished success, and in the present case, the disease having been of long continuance, and many other applications having been tried in vain, its advantageous influence is the more conspicuously marked.

Henry Stevens, aged 22, was admitted into the Derby Infirmary on December 23, 1833, under the care of Dr. Bent. Fourteen months ago he first became affected with leprous eruption, which now extends over the greater part of his body and limbs. His legs and arms are, however, most covered with patches; which are red, distinct, and chiefly circular in form, none exceeding the dimensions of half a crown, and the greater part being very much less. They are a little raised above the level of the surrounding skin, and covered with dry scales; health in other respects good. About three or four months previous to his present admission, he was discharged from the hospital, after having been nine or ten weeks under treatment without obtaining any manifest advantage, although various remedies, very judiciously applied by another practitioner, had been had recourse to: of these, the chief were the steam-bath, calomel and antimony, tincture of iodine, decoction of sarsaparilla, with oxymuriate of mercury; bleeding, the sulphur vapour-bath, and the warm-bath.

December 23d.—The vapour-bath was directed, chiefly with a view to soften and remove the scales, and the following ointment was applied to the left arm night and morning.

℞ Hydriodat. Potassæ, 3ss.; Iodinæ, gr. iv.; Cerat. Cetacei, ℥ij. ft. ung.

26.—The empl. hydrargyri, spread on calico, was now applied in strips to the right arm, from the hand to the shoulder, and to the whole of both legs and thighs; the iodine ointment being continued of increased strength (Hydr. Potass. 3j., Iodinæ, gr. vj.), with a view of observing the comparative efficiency of the two applications.

31st.—The left arm, to which the ointment was used, had undergone no change; but when the strips of plaister were removed from the other parts, improvement was very observable.

Treatment continued.

January 8th.—No change in the left arm; other parts continue to improve. Omit the ointment, and let the left arm be now covered with plaisters, as well as the other limbs.

Hab. Liquor. Potassæ, 3j. ter die ex aquâ.

23d.—The same treatment was persisted in till to-day, when his gums were become very sore and his mouth inflamed. The patches of eruption had a greatly improved appearance; no elevation or scaliness could be seen, and the surface had a smooth healthy character. Owing to the state of his mouth, the empl. hydr. was now omitted, and the following ointment substituted in lieu of it.

℞ Ung. Picis; Ung. Sulphur.; Cerati Plumbi superacet. aa. ℥j. ft. ung. quo illinantur partes affectæ omni nocte maneque.

His bowels being griped, tinct. camph. com. was added to the liquor potassæ, and a gargle containing chlor. sodæ was used for his mouth.

27th.—Mouth continues sore; eruption going on well.

February 10th.—Eruption has nearly disappeared. Behind the neck and upon the shoulders were many small tubercles, of the kind occurring in acne; to which he had been liable a long time. To relieve this, the following lotion was applied twice daily.

℞ Hydr. Oxymur. gr. viij.; Sp. Vin. rect. ℥iv.; Aquæ Fontis, ℥xij. ft. lotio.

17th.—The leprous eruption has now disappeared. He was directed to use the vapour-bath, and all other remedies were omitted, except the lotion to the neck and shoulders.

20th.—Is free from complaint.

24th.—Discharged cured.

Although, in the foregoing case, the treatment was not limited solely to the employment of the mercurial plaisters, there is no doubt the other remedies acted a very subordinate part, and the cure must be attributed mainly to them. His diet during the time did not deviate from the ordinary allowance of the house. It may be well to state, that in the use of this application some management is requisite. In Stevens's case, though continued for several days together without removal, the plaisters never excited too much, or irritated either the healthy or diseased portions of the skin; but in some instances it is otherwise. After three or four days, the parts begin to tingle, become inflamed, and a small papular eruption shews itself. When this happens, the mercurial strips should be removed, and their place supplied for a day or two with simple diachylon; to be succeeded again by the empl. hydr. and so on, alternating them, as circumstances may indicate. Some parts about the nates and back were not covered with the plaisters, and underwent no change in appearance till after the patches on the limbs had undergone considerable amendment. Afterwards, and particularly when the mouth became mercurialized, they gradually vanished.

Should you consider the above concise and hasty observations upon what I consider an interesting and instructive case, worthy of a place in your excellent journal, pray have the kindness to insert them.—I remain, sir,

Your obedient servant,

Richard Dix,
House Surgeon.

Derby Infirmary, Feb. 26, 1834.

ON LUMBRICI:

The Causes of their Prevalence, and Treatment, as practised in the Mauritius.

By Robert Dyer, M.D.
Assistant-Surgeon to the Forces.

This complaint is nearly universal in the Mauritius: the most healthy, as well as the weak and sickly, seem equally obnoxious to its production. Nor are the patients often aware of the presence of those animals until they see them discharged. No age or sex is exempt.

In the black population, and especially the slaves, it is nearly their only complaint; and in such numbers are the lumbrici produced, that I have frequently been disgusted by seeing them crawling from the anus and mouth at the same time. One black literally (after having taken the usual medicine exhibited on those occasions), brought me his hat full, which he assured me he had passed very shortly before.

The symptom most generally complained of is griping pain in the belly, which is always enormously large and hard, with constant desire to eat. Frequently there is vomiting, and irregular action in the bowels, headache, convulsions, spasms, and various hysteric symptoms. To assign a cause for so great a tendency to worms, I am at a loss. Nor does their origin appear more clearly accounted for by writers on this subject. The general opinion is, that they are derived from external sources, such as water, rice, &c.; but it appears to me probable that their existence depends very much upon the condition of the individual, whereby the system is rendered more susceptible of their production: and this susceptibility and condition of the individual will be greatly influenced by the nature of the food. I have somewhere seen it stated, that individuals fed without salt, or where little of it enters into the aliment, are more liable to this complaint than those who make a liberal use of it; and that a recurrence to its use freely will destroy the tendency, and act as a cure. The following facts certainly tend to corroborate those observations; and as they are not single and isolated, but gathered from numerous cases, and by many intelligent individuals, are deserving of credit.

I have before stated, that the coloured

population, and especially the slaves, are incessantly and universally subject to worms. This class of persons seldom or never eat salt: they are fond of it, as they are of any thing of which they are deprived, or which is not within their reach, and will endeavour to procure it if they can; but, as it never forms part of the ration of the slave, from its being an article of import, and consequently expensive, and the slaves themselves having little or no means of obtaining it, they seldom see it. Among the convicts (who are natives of India, and condemned to work on the roads for life), and the government slaves, both of whose rations very much resemble that of the European soldier, such a disease is of comparatively rare occurrence; and I perfectly well remember contrasting the rarity of this complaint in a black corps, of which I had medical charge, with the great frequency of it in the slaves of the planter. Farther: many of the planters who had been induced to allow salt to form part of their slaves' rations, have informed me, that after continuing it for some time, they had discontinued it, and that very soon the old complaint became prevalent, and obliged them either to revert to its use or supply its place by some other expedient. They all admit its advantage, but all complain of its expense. This may appear strange, that so trifling an addition to the ration, and one the benefit of which they admit, should be objected to, on the score of increasing so materially the annual expense of maintenance; but I think this will readily be conceded, when it is recollected that on many of the plantations to which I at this moment allude the number of slaves exceeded 500. To obviate this difficulty—keeping in view economy, and still maintaining the health of the slave—many have adopted the plan of administering *salt* as a medicine; this they give in the quantity of a table spoonful in half a pint of water to every slave, regularly every Saturday after work. And I am assured by those who have adopted this plan—and they are persons on whom perfect reliance may be placed—that the object has been most perfectly fulfilled; and they moreover state, that they believe their slaves to be possessed of more vigour and bodily strength, and altogether more healthy, since they have made use of this simple expedient.

By this digression, I have been by anticipation led to the mode of cure, as salt, in liberal doses, is not only a preventive, but nearly as active a means of cure as any of the remedies in common use. I have frequently made trial of salt, and have never had occasion to rob it of its merit, by being disappointed in the result. I have seldom, however, used it where the patient had much bodily suffering: only in cases where the general health appeared good, but with symptoms sufficiently indicative of the presence of worms.

The mode of administering it was in solution—a table spoonful in half a pint of water the first day three times, and following this up the next morning by an ounce of castor oil; after this, a table spoonful every night, so long as worms were produced.

There is yet another remedy, I may safely say specific as a vermifuge, which is very generally used in the Mauritius, and with never-failing success in its effects;—I allude to the "*Lait de papaya*," which is an exudation of a white glutinous fluid, from the green fruit of the tree "*Carica papaya*," procured by scratching or scoring the fruit with a knife. In botanical works its vermifuge qualities are mentioned, though cursorily; but I do not observe it noticed in any of the medical works that treat on worms: yet, from what I have seen of it, it appears to me that it ought to stand higher in the class of vermifuges than any medicine known, not only as being certain in its effects, but, from all the inquiries I have made, I have never been able to learn that an over-dose has produced any unpleasant consequences. As yet, however, there is a difficulty which must be removed before its use can be general, but which the chemist, were his attention directed to it, would soon obviate;—I allude to the difficulty in procuring it, excepting in countries where the tree grows, as well as the preserving it for any length of time, undiminished in its properties.

The tree is of rapid growth and extremely prolific, and bears fruit in eighteen months. It is tolerably well described in Curtis's Botanical Magazine (second series), and I need not repeat what is there stated. The quantity of juice which may be obtained from any single fruit is very abundant; it looks like thick cream. If mixed slowly and gradually with hot water, it forms an equal milky-looking fluid: if the water

is poured suddenly on it, without stirring, the juice coagulates, and floats on the top; in both cases a considerable portion separates from the water, after remaining at rest for a quarter of an hour. The pure juice, or the cut fruit, rubbed on the skin, or chewed, excoriates and blisters the parts; and it feels hot to the taste, like chillies.

The dose varies with the age of the patient. To a child under ten years, a tea-spoonful will be sufficient; above that age, from a dessert to a table-spoonful is the dose. The juice (in whatever quantity is deemed requisite) is first mixed up with some honey, and generally a table-spoonful of boiling water slowly added. The part that coagulates and floats, is by some removed; but I have given it as often with as without this scum, and never observed any marked difference in the effects. A dose of castor oil is always given two hours after. The seeds of the fruit chewed have the same effect. The other properties of this singular tree I will not enlarge upon, farther than by confirming the reports given in botanical works, which I have often seen practised—viz. the power it has in rendering meat tender, and of inducing rapidly its passing into a state of putridity. A fowl hung to the tree under its branches, will, in a quarter of an hour, become extremely tender. If left during the night, the skin will leave the flesh, and the flesh the bones, with the least handling; a few hours more, every fibre will separate from another. With every description of meat these effects are striking, but with none more than with that of pigs.

The ripe fruit is not unpleasant, and is often served up at dessert. It makes an excellent preserve, and keeps well.

There is a species of the flowering ash (Melia Azedaroek) which is indigenous both at the Cape and Mauritius. The bark of the roots, infused in boiling water, and drunk fasting, is very frequently given by the planters to their slaves, for the cure of worms; and I am assured its effects are equally certain. It is purgative at the same time, and requires no medicine, like the others, to be taken after its use. As a medicine for cattle and dogs, it is particularly safe and efficacious. I have never made use of it.

Having only been led to speak of the cure of worms, in my endeavours to investigate the causes of their prevalence, in compliance with the wishes of the Director General, contained in a late circular, it will not be deemed necessary that I should extend these remarks to the various *remedies* usually employed in such cases.

MEDULLARY SARCOMA IN THE BRONCHIAL GLANDS.

To the Editor of the Medical Gazette.

Sir,

Happening recently to peruse the elaborate article on *Cancer*, contained in the Dictionnaire de Médecine et de Chirurgie, now in progress of publication, I was induced, by the learned writer's statements (p. 491), as well as by my own impressions of the infrequency of certain forms or seats of the disease, to conceive that I should not trespass on your valuable pages with matter devoid of interest, by requesting your insertion of the following record of the postmortem appearances of two cases of "*medullary sarcoma in the bronchial glands*," occurring lately, under my care, at the Birmingham General Hospital. The first is taken from my case-book at that institution; the second is copied from the private minutes of my late colleague, Dr. Darwall, who assisted in the examination of the body. The much-lamented sequel of his zeal on this occasion need not be recalled to the too recent recollection of his friends and professional associates.

I remain, sir,
Your very obedient servant,
John H. Booth, M.D.

Birmingham, Feb. 25, 1834.

Case I.—*Postmortem appearances in the Case of Joseph Gould, æt.* 20, *November* 28, 1832.

Externally, the body did not present that extreme degree of emaciation which is generally to be observed in patients who die from tubercular disease of the lungs. The chest was full, and completely dilated; remarkably dull on percussion. On reflecting back the sternum, the lungs had the appearance of being much distended, but not unhealthy. To the touch, however, they felt dense, and crepitated only in one or two parts. The pleuritic adhesions were so firm on both sides, that the lungs were obliged to be dissected off.

On removing them, it was found that only a very small portion was sufficiently healthy for the purposes of respiration; the chest on each side being occupied by tumors of a medullary nature. On the right side was one almost as large as the healthy lung itself. This tumor was slightly lobulated externally, and had internally a cyst, divided imperfectly by a septum, and containing about eight ounces of dark-coloured serum. Some parts of the tumor were of a soft and fibrous texture, and in colour and other respects very similar to firm brain; other parts had a red appearance, occasioned by minute specks of blood; and, again, others were transparent, or gelatinous. The lung, or rather the pleura, was expanded over this morbid structure, and could be easily torn from it, leaving the latter entire and smooth.

Part of the upper lobe appeared to be the only remnant of lung existing on this side; and even this was of a vivid red colour, and contained numerous small tumors both in its substance and on its surface.

The left side of the chest contained numerous tumors, but none were so large as the one described. One was about the size of a man's fist, and another, less, was situated immediately behind the heart. It was very vascular, particularly on one side. It contained no cyst, but the centre was filled with a greenish, straw-coloured, gelatinous substance. Very little healthy lung was left on this side.

The pericardium was very closely connected to these morbid structures, and contained a small quantity of fluid.

The heart and abdominal viscera were quite natural.

In attempting a general character of these structures, we may define them as being of a true medullary or encephaloid nature, containing different deposits—as blood, transparent lymph, or gelatine and serum. Some of the small ones contained a drop or two of fluid blood, which scarcely appeared to have escaped from any vessels severed by the knife. Others were homogeneously constituted. In some of the larger tumors the different deposits co-existed. All were invested in a delicate cyst, and imbedded either in the substance or on the surface of the lungs, under the pleura pulmonum. The tumors varied in size, from a pea upwards to the extent mentioned previously.

It is worthy of remark, that this patient had suffered amputation of his leg about four years ago, in consequence of a tumor of the same nature, which occupied about eight inches of the leg, immediately above the ankle-joint.

Case II.—*Postmortem appearances in the Case of William Brown, æt.* 36, *July* 30, 1833.

"The left lung was infiltrated with pus and the left pleura was inflamed, as was also the pericardium. There was a large quantity of serum in this pleura, and the pericardium was very much distended with a dark coffee-coloured fluid. The bronchial glands of this side were very much enlarged, and changed, for the most part, into a white medullary mass, which involved the left primary division of the bronchi in it; and though the wrinkled state of the lining membrane enabled us to trace its passage, the colour was lost, as also was most of the cartilaginous substance.

"A part of this medullary mass was quite soft, and almost fluid; and in another part it had a pinkish hue. There were also some fibrous white bands traceable."

It would be nugatory to mention, in detail, the *symptoms* and *treatment* of the patients. It will be sufficiently obvious that the symptoms scarcely could be more than negative, as to the precise nature of the morbid degeneration of the lungs. Laennec would seem to have thought that the stethoscope might detect the existence of *encephaloid* tumors in the lungs, when voluminous, but has not indicated the means of thus discriminating their character. In the two cases occurring in the Birmingham Hospital, the outline of the more urgent symptoms was that of bronchitis, and the treatment was adapted to the only indications afforded. A coincidence with these views and observations will be noticed in the article of the Dictionnaire de Médecine et Chirurgie Pratiques, to which reference has already been made. The term "cancer," it should be remarked, is adopted by the writer, M. Bouillaud, in a generic sense; but, with Laennec, he applies it especially to schirrous and encephaloid growths. Dr. Carswell, in his valuable pathological work (Fasc. 2), also constitutes "carcinoma" a genus comprehending those diseases which have been

termed scirrhous; common vascular or organized sarcoma; pancreatic, mammary, and *medullary sarcoma*; and fungus hæmatodes.

PRESENT STATE OF THE MEDICAL PROFESSION IN THE WEST OF ENGLAND*.

THE practitioners in the West of England are numerous, and for the most part respectable; the majority of them belonging both to the College and Hall. From the best calculation I can make of the number of general practitioners in the towns, I find there is one to every thousand inhabitants; in many instances, however, there are two or more to this number of people. In most of our provincial towns (even small ones) we have a physician or physicians, and the chemists and druggists are in the proportion of two to every three thousand inhabitants.

The general practitioners are not in the habit of charging for visits or attendance in the towns, and the only way in which they get remunerated in medical cases, is by making out bills for their medicines, charging each article separately, and specifying the quantity sent from day to day. Journeys out of the town in which the practitioner resides are charged for, and the charges vary from two shillings and sixpence to five shillings: it is not usual to charge more than the latter sum, except the distance exceeds seven miles. It is not common to make any charge for meeting a physician in consultation.

Parishes are usually let by tender, and the lowest bidder generally gets the appointment to take charge of them. The low rate at which persons are found to accept them is truly disgraceful to the members of a respectable profession. I will name a few particular instances to prove the fact; assuring you, at the same time, I could cite a hundred similar ones. The Parish of East Coker, Somerset, containing upwards of 1400 persons, the majority of whom are paupers, is attended by a practitioner—a Mr. Hansard, of Montacute—residing four miles from the place, at a salary of 12*l.* per year; and for this sum he includes all medical and surgical cases, accidents of every description, small-pox, inoculation, or vaccination, and difficult midwifery cases, together with attendance on coroners' inquests, lunatics, &c. Mr. Hansard stipulates to attend regularly at the poor-house three times a week, independently of all other calls; and, on a moderate calculation, his turnpikes must cost him at least three pounds in the twelve months; such being the usual terms of agreement where parishes are compounded for. The parish of East Chinnock is attended by a practitioner—a Mr. Gerrard, of Crewkerne—residing five miles distant; who compounds for all cases at 8*l.* per year. The population is about 1000, and by far the greater number are paupers. Mr. Gerrard has to pay two turnpikes every journey he takes. The parish of Piddle-Trenthide, Dorset, is attended by the Messrs. Davis, of Cerne, residing at a distance of four miles, at a salary of 10*l.* per year. The population is upwards of 800. The sum paid for medical and surgical attendance on the poor of the same parish, in the year 1814, was 70*l.*; but owing to the disgraceful system of letting by tender, it has been reduced to the sum above stated. The parish of Stoke Sub-Hambdon, Somerset, is attended by a Mr. Westcott, of Martock, residing two miles distant, and he compounds for every case that may occur, agreeing to find medicines and surgical instruments at a salary of 8*l.* per year: the population is upwards of 1600. There are a vast number of paupers at Stoke, and they are very liable to serious accidents, in consequence of their being employed to quarry and hew stones, which are used in almost every building of consequence within twenty miles of the place. The parish of Norton Sub-Hambdon consists of a population of 800 persons; the paupers are numerous, and generally employed at the stone-quarries; the poor are attended by a Mr. Stuckey, of Martock, who compounds for all cases at a salary of 5*l.* per year: the distance of Norton from Martock is three miles. Chisselborough, a parish four miles distant from Martock, is also attended by Mr. Stuckey, and every thing compounded for at 5*l.* per year: there are seven or eight hundred people, and the paupers are principally employed at the Hamdon stone-quarries.

Whilst this plan continues, the poor

* Originally addressed to the Council of the Royal College of Surgeons; by one of whom we have been favoured with the document.—ED. GAZ.

ever will be neglected and maltreated; but it appears to me that an effectual remedy can be provided in the following way. If, for instance, parishes were obliged to pay a certain sum per cent. on their pauper population, for medicines and surgical applications, the surgeon taking the risk of illness and accidents,—and then for him to be allowed so much for each visit in his own town, and so much per mile for journies out of the town,—if such a plan was put in force, the parish-rate payers could not select the cheap surgeon, but they would choose the one whose professional skill and honourable conduct was in the best repute; the competition would be between men of skill, and the greatest stimulus would be given to the acquirement of sound professional knowledge. These are facts; and however the more respectable practitioners may attempt to keep up fair and reasonable charges, they find it impossible, as there are low undermining men ready to intrude themselves wherever they can get a footing, and on the plea of cheapness. Such persons can always gain appointments from the farmers, overseers, and rate-payers of country parishes. Degrading as these facts are, the Council will be surprised to find that, in many instances, parishes are attended by ignorant chemists and druggists, in ordinary cases; and where disease assumes a more formidable character, the overseer often sends the paupers to a physician, or some one goes to him to describe their disorders. The physician prescribes, and sends the patient to the druggist, who supplies the medicines, and the consequence is that acute cases run their course, either to death or convalescence, without bleeding or cupping ever being prescribed or practised. The extent to which chemists and druggists prescribe and dispense medicines behind their counters, is, of all others, the greatest grievance of which the general practitioners have to complain; and at any time I would swear, either before the Council or a Committee of the House of Commons (if examined on the subject), that the chemists and druggists of this town, and most provincial towns in the west, prescribe and dispense more medicines, dress more wounds and ulcers, inoculate and vaccinate more patients, than the general practitioners. This is independent of the monopoly carried on between the chemist and physician in the way of prescriptions; which, too, is very extensive. Of course I am aware that the Apothecaries' Act of 1815 provides a remedy against those who were not in practice prior to that time, visiting patients; but although we know the fact, there is great difficulty in bringing persons forward to prove it, and I think the general impression is, that the act does not prevent the chemist from prescribing and dispensing at his own counter.

The parish officers in this vicinity refuse to remunerate medical men for attending coroners' inquests; and I have myself been kept from my practice, in several instances, the greater part of two days, at an inquest, and refused remuneration.

The law, as it regards accidents and casualties, is most defective. For instance, a pauper belonging to one parish, A, meets with a serious accident in the parish of B; the surgeon resides in the parish C. The accident is of such a nature that no time is to be lost in finding out the overseer to get an order, and the surgeon is obliged to act immediately; and after having done so, he is either compelled to give up the case to some practitioner in whose skill he has no confidence, and who, perhaps, if the case terminated unfavourably, would be illiberal enough to declare that the fault rested with the person first called, or else he must consent to act gratuitously; as in nineteen cases out of twenty would be the case. The parish of A, for instance, would not pay, as they had not been applied to: the parish of B would not pay, on the plea that the pauper did not belong to them, even if he resided there for a time, as they would say he had not gained a settlement; and the result would be the same with the parish C; or else they would say, you are not our regular parish surgeon, and therefore have no claim; we would have sent our own surgeon if we had been applied to. Such is the manner in which I have been treated in very many cases, where the delay of finding the overseer, or parish surgeon, might have been fatal; and every professional man, in extensive practice, can state the same of himself. The law, therefore, I presume, ought to provide that the surgeon who attends promptly should be remunerated; as the public clamour, in case of his refusing to go to an accident, or to act when he arrives, may for ever

ruin him. The probability is, that the surgeon is fetched to the accident by the servant of some nobleman, esquire, clergyman, or farmer, whose kindness simply extends to the act of sending for him; for when the bill is presented, he is told to take it to the parish officers, and then he finds himself situated as I have described. Such is our misfortune in instances of compound fractures, with wounds of arteries, severe injuries of the head, compound dislocations, &c. &c.

I cannot here omit to mention one fact, which, some time since, happened to a respectable surgeon in this neighbourhood. He was sent for to a poor man who had met with a very serious accident, and on his arrival found him by the road side. He directly said, "I can do nothing for the man here, you must take him to the inn;" which was near the spot, and in the parish where the injury was received. The accident was such that the surgeon was obliged to attend to it without delay, and the man remained at the inn many weeks afterwards, before he could be removed to a distant parish, where he belonged. After his recovery, the surgeon sent his bill to the overseers of the parish where the accident happened, and they resisted payment, as they had not given an order. The surgeon then applied to the parish where the man belonged, and they also resisted payment; pleading that they were not liable, as they had given no order to the medical attendant, and the accident happened in another parish. The surgeon found, that as he had acted without an overseer's order, he could not recover his charges by law, and the individual himself was unable to pay him. This, however, was not all; the innkeeper was refused payment by both parishes for the keep, attendance on, and nursing this pauper; and not being in a situation to lose his expenses, he naturally inquired who sent the man to his house; and finding that the surgeon had ordered him there, and given directions for his food, nurses, &c. he actually brought the charge on him, and the surgeon was compelled to pay the whole expense.

The system of quackery is carried on in the West of England to a most extraordinary extent; as there is not a chemist, ever so obscure, but has his cough, aperient, and digestive pills, worm-powders, &c. &c.; and thus the regular practitioner is materially interfered with. Every neighbourhood is infested with some bone-setter, or notorious advertising quack, and the number of persons who flock to them is really incredible, except to those of us who have an opportunity of witnessing the fact; persons, too, who are in a situation to afford to remunerate a regular practitioner, but are duped by the puffing advertisements of those individuals.

From these various sources, then, the Council will readily perceive, that without parliamentary interference, and such immediate enactments as will secure the general practitioner from such abominable intrusions of illiterate and unqualified individuals, as well as from the unjust interference of the physicians, the honour and respectability of the profession will be for ever lost, and the attempts of the College to render its members intelligent and competent in all respects to discharge the duties required of them with fidelity and honour, will be rendered unavailable; and I therefore humbly implore the Council to impress on the legislature that an inquiry into the laws and regulations of the College can in itself be of little avail, unless they also institute such an inquiry into the general state of the profession, and the actual situation of its members, as will secure their protection, and put them in such a situation as the charter of the College originally intended, and as they have a fair right to expect; as those of us who wish to maintain the respectability of the profession cannot absolve ourselves from the concluding sentence of the oath taken on our becoming members of the College—"that we will demean ourselves honourably in the practice of our profession, and, to the utmost of our power, maintain the dignity and welfare of the College: so help us God."

(Signed) Wm. Tomkins,
Surgeon, M.R.C.S.

February, 1834.

We, the undersigned members of the Royal College of Surgeons, residing in the town of Yeovil, fully concurring in the account given by Mr. Tomkins, of the general state of the medical profession in the West of England, beg to subscribe our names in corroboration of the same.

(Signed) Thos. Shorland.
Markes Lambe.
John Moore.
G. E. Hooper.
Wm. Shorland.

BARRISTERS AND PHYSICIANS.

To the Editor of the Medical Gazette.

Sir,

Among the numerous projects of medical reform called forth by the present agitation of the question, the one recommended by your correspondent, Φ, in your last number, amuses me the most. His words are, "Among the private arrangements between the medical men that it would be desirable to establish, I should recommend that no M.D. should give advice without the co-operation of a general practitioner, who would, as a matter of course, prepare the medicines; and from his more frequent intercourse with the patient, would be of no small use in consultation with the prescriber. Barristers (except in court), will give no opinion but on being applied to by an attorney."

This might be a very good arrangement, provided the general practitioner was obliged to call in a physician after a certain number of days' attendance. But if general practitioners are able to persuade their patients that the education they now receive renders them competent to the care of the most difficult cases, and that the attendance of a physician is perfectly unnecessary,—and we have many instances of the calling in of a physician being stoutly resisted,—will not the proposed arrangement be tantamount to driving the physician out of employment? The instance of a barrister, adduced by Φ, will not serve him: a barrister gives no opinion on a case without being applied to by an attorney —because he cannot. To enable him to form an opinion, it is requisite that the case should be *technically* stated, and for this purpose an attorney becomes actually necessary. But a physician has eyes and ears, and all his senses perfect, and can himself ascertain all the points which are requisite for him to know. Besides, the interests of a barrister and of an attorney can never clash. It requires a wiser head, I fear, than that of your correspondent, to place the medical profession in a healthy condition.—I am, sir,

Your obedient servant,

Σ

Feb. 28, 1834.

MEDICAL GAZETTE.

Saturday, March 8, 1834.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

ANALYSIS OF THE NEWEST *REPORT*.

The statement just put forth by the managers of the Gower-street School is a remarkable one in its way. It will be recollected that the report published last year was exceedingly desponding and lachrymose: it professed "the most open dealing," and we gave it ample credit at the time for its candour; but it incurred the hot displeasure of a number of knowing ones, because, in fact, it most indiscreetly told—the truth. "What!" said one of these worthies, "is this the way in which *men of business* act when they would *make a push to improve their circumstances?* When they wish to raise a loan, do they represent themselves as bankrupt or insolvent?" Upon this hint the managers, in the present instance, have evidently acted: they come now before the proprietors of the speculation with nothing but congratulations on their lips, and announcements of bright prospects which are to come. No longer do they venture to hint at being "reduced to the necessity of giving notice that the institution cannot re-open;" no, no,—all that sort of thing has been changed: it is never too late to learn from the precepts of experience. The style is altered: their affairs are blazoned in the true "Ercles' vein." In looking through the new report, every one is struck with the abundant repetitions of the "Senate" and the "University" —the "Council" and the "Faculties" of arts, law, and medicine, with their respective deans and chapters—"Professorships" and "Chairs"—and "new Professorships" and "new chairs," just

instituted, or "under immediate consideration."

But some one, looking superficially over the document, may say, "Perhaps there is reason for all this boasting: may not the Gower-street establishment have been unusually prosperous during the last year; and if so, why not allow the parties to exult a little in their good fortune? What may be the principal *facts* laid down in the report?" Why, truly, this is what we have taken some pains to come at; and so ingeniously do the *facts* seem to be wrapt up in the new system of account-keeping, that it requires no small attention to make them out. But divested of verbiage, and examined with a plain matter-of-fact scrutiny, it would appear, that in the Faculty of medicine there has been an increase in the number of pupils, as, indeed, has taken place in the schools of London generally; but for the other Faculties—small and sinking as they were last year—the diminution has since gone on steadily; and even the boys' school—the hope of the establishment—the chief boast in the report of last year—has suffered a decrement. As to law and jurisprudence, in these the failure has been signal: the professor of the latter has given up lecturing altogether, for want of pupils; and the class of the former has so dwindled away, owing to *untoward* circumstances, that we are informed the learned occupier of the chair intends to bid adieu to the "University" as soon as he can get himself well disentangled from it. Yet, though the managers slightly advert to this circumstance, it by no means prevents them from pursuing the bold career they have adopted: the more bold, perhaps, as the prospect is more truly barren. They talk of instituting *additional chairs of law*—of the civil law—the law of real property—and the doctrines and practice of courts of equity;—English law and jurisprudence having been so very flourishing! Nor are these the only new chairs in contemplation: there are others *in esse*, as well as *in posse*; while for many of those already established no pupils can be obtained. Sanscrit and the Oriental languages are appointed to be henceforth distinct professorships—what a humbug!—while the professors of German and Italian are unable to get a single pupil.

Thus, then, the *soi-disant* University, with all its affectation of having professors (whether with pupils or not, seems to be quite a secondary matter) to teach every thing under the sun—except theology—turns out to be simply a medical school, with some general classes attached to it, and an abundant *list* of teachers in different branches of knowledge. It is, as we have all along considered it, a medical school—one out of many with which the metropolis is supplied, and much inferior to several of them. In this respect it is unquestionably inferior;—it is wholly unprovided with the means of clinical instruction. This its managers well know, and are incessant in their efforts to move heaven and earth, and organize, if possible, something in that shape. The *Valetudinarium* is a monument of their anxious zeal. There it stands, in all its nakedness, with its bare unplastered walls; and miserable and mendicant as it looks, it is in debt to the amount of about 1000*l.*! It is amusing to observe the shifts made in the arithmetical statements before us, in order to shew the feasibility of turning this structure to account. We are told that (in addition to the debt just mentioned) it will require 2000*l.* to finish it, 1000*l.* more to furnish it, and *only* a few hundreds for the management in the meantime; that is to say, till it is ready for service. This makes up a desideratum of about 4200*l.* on their own shewing, before a single patient can be received. Now,

as all the subscriptions are expended—that is to say, the *subscriptions paid*, for we cannot be persuaded, as the skilful accountant would have us, to admit that "subscriptions in arrear" should be reekoned as received or available—the Caroline fund of 1200*l.** is the only set off; leaving a clear deficit in the hospital finanees of about 3000*l.*

We say nothing of the gross miscalculation (if it deserve not some broader epithet) by which 1000*l.* is set down as suffieient to furnish the building; a building to eontain from 130 to 160 beds! Of this we have, on a former oecasion, fully expressed our opinion. But the inuendo dropped about the present expense of the Dispensary is worth notieing: it appears that that establishment is a losing eoncern, to the amonnt of 150*l.* per annum; and the proprietors are gravely told, that by completing the hospital this 150*l.* will be saved. What greater encouragement can be held out? The school has a dispensary, as it is, attached to it; pupils attend, but after all it is a losing coneern, to the amount of 150*l.* But so much saved, so much gained; abolish the Dispensary, say the managers, and there is a good 150*l.* per annum at the disposal of the hospital fund—a better donation, at this rate, than the Caroline fund itself! But, again say the economists, we eannot give up the Dispensary till the Valetudinarium is *begun*; give the pupils an hospital to attend, and we shall lose no more by the Dispensary. We should like to hear proprietor Joseph Hume's candid opinion of this proposition; we faney we ean hear him mutter grumblings at the stupidity that threw out such a lure;—at the simplicity of those who shew the public what ehance there is of the Valetudinarium supporting itself by pupils' fees, when, with all the fees received from students at the Dispensary, that coneern, attended with an expense comparatively so trifling, is a dead weight to the expenditure of the school, to the amount of 150*l.* a year. We ean readily eoneeive, if it were the reverse—if 150*l.* could in any way be shewn to be *gained* by the Dispensary—how the ehanges would be rung on that fact. As it is, the only reasonable manner of stating the question is this—if the institution loses 150*l.* by a Dispensary, how mueh more would it cost to keep up an Hospital?

Then there is the juvenile establishment—the boys' sehool—which formed so important an item in the prospects of last year, and which, indeed, is still so important a feature in the organization of the "University,"—though removed to the body of the building, and now oecupying the most prominent part of the strueture—even this has fallen off, having fewer pupils now than it had in 1833. This has an untoward aspect, when we take into aeeount that, chiefly on this school, has there been expended the better portion of the 1000*l.* raised on a sudden emergeney last year, by way of loan, from ten proprietors—half of which loan remains unpaid.

And this leads us to notice another eireumstance that struek us in looking over the aeeounts. This sehool loan, as well as the mortgage of 4000*l.* raised in the eourse of last year, is set down under the head of *capital* in the general aeeount of income and expenditure; by which manœuvre they are enabled to throw in the eaptivating item of so mueh cash—some 1000*l.*, or thereabouts—at the banker's. Now, in our plain way of looking at such an item—our first impression *was*, that the affairs of the establishment were so unembarrassed, as to leave so much cash at eommand, for the benefit of the institution; but considering that the mortgage and the school

* The Caroline fund intended to endow certain *wards*, by the way, is not sufficient to support *three beds* in any well-organized hospital.

loan are yet unpaid, and that the former bears a considerable interest-charge, our inference *is*, that in place of having *any* money at command—with the exception of Queen Caroline's fund, and a chance donation—the Gower-street school is actually some 3500*l.* *minus* the state of solvency. But the mortgage, no doubt, is good; it is put down as *capital!*

We shall, of course, have little thanks from the *friends* of the "University" for the remarks we here offer regarding their affairs; but what we have said is conceived in a spirit of sincerity and candour, however unpalatable it may be to the stock-jobbing portion of the proprietors, or those among the teachers who choose rather to mystify the public than to rest upon their merits. We have shewn, then, that the University, so calling itself, is properly nothing more than a medical school, offering some facilities for education similar to those possessed by an ordinary academy, but deficient in that best source of professional information with which such a school should be provided—a well-organized hospital. The *Faculties*, as they are called, have on the whole suffered a decrement—feeble as the said faculties have ever been; and one of them is on the brink of being extinguished. Even the junior school, from which so much was expected, does not keep its ground. Yet, notwithstanding this, in the face of the public—for let it not be thought that we have gone out of our way to procure the information here detailed, and to comment on it for the benefit of our readers—notwithstanding the facts so ingeniously mystified in the annual statement, but sufficiently intelligible to all who choose to reflect—notwithstanding all this, the Council talks big of new chairs, &c., and holds forth that none are so fit as themselves to be endowed with the rights and privileges of a real University. The Council last year, in announcing the dilapidated state of their finances, proposed various "*schemes*" for bettering their condition—among these, the first in the list was that of obtaining a charter, enabling them to confer degrees in all the faculties—arts, law, and medicine—divinity alone excepted! Verily, we give them credit for this same "scheme," and for the time they have chosen for pressing it; thus virtually striving to forestal the result of the parliamentary inquiry which is in progress. The bold mode they have adopted in pushing their affairs as "men of business," shews that they have profited notably by the hints given them last year*.

MEDICAL DEGREES IN LONDON.

A MEETING was convened on Monday, the 17th ult., at which deputies attended from all the principal hospital and private schools of medicine in the metropolis, for the purpose of adopting such steps as might be deemed necessary, in the event of the London University pressing for any *exclusive* privilege in conferring medical degrees. We understand that the sense of the meeting was strongly expressed in favour of freeing the dissenters from the disabilities they at present labour under with respect to English degrees in physic; but protesting against the establishment of a new monopoly in favour either of the London University or any other teaching body whatever. A general committee was appointed, consisting of a representative from each school; and a sub-committee, consisting of Sir George Tuthill, one of the oldest private lecturers in London, Dr. Watson, of King's College, and Mr.

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* By a singular oversight in our last number, page 837, we represented the proprietors of the London University as periodically sending round a report that their application for a charter had at length been *unsuccessful*; we need scarcely say, that the word ought to have been *successful*.

Lawrence, of St. Bartholomew's, wer nominated to carry into effect any such measures as might be deemed necessary for securing the objects of the meeting.

PHYSICIANS AND GENERAL PRACTITIONERS.

The letter of Σ (see p. 873) contains some remarks which we think are fairly called for by the observations of Φ, in a former number. Once for all, we would have it distinctly understood, that in selecting the letters of our correspondents for publication, we are guided by no feeling of party: on the contrary, we wish to give a fair field, and no favour, to those who entertain even the most contrasted sentiments. We need scarcely add, that we do not consider ourselves bound by the opinions expressed in any contributions to our pages, except those which appear editorially.

NATIONAL MEDICINE AND STATISTICS.

To the Editor of the Medical Gazette.

Sir,

In your leading article of the 22d February, on the Statistics of the Profession in some of the capitals of Europe, you state that it is fair to presume that London is less efficiently supplied with medical assistance than Paris or Berlin, because the Doctors-Graduate in the former are proportionally much fewer than in the latter capitals. Now, without contending for equality of education, the general practitioner may fairly appeal to the most essential test of ability for providing for the medical service of the public, by a reference to the value of life in the three capitals quoted. Dr. Bisset Hawkins, our best authority on this subject, gives for the annual mortality of Paris, one in thirty-two; of Berlin, one in thirty-four; and of London, only one in forty.

A difference in the one instance of one-fifth, and in the other of rather less than one-sixth, in favour of the English capital, which (with every allowance for the different circumstances of the three cities), is still amply sufficient to convince the inhabitants of London that however inferior in title their medical attendants may be to those of other capitals, that in real efficiency for service they need not shrink from a comparison with any. Trusting that your known impartiality will induce you to insert this, I remain, sir,

Your obedient servant,

Unus Quorum.

March 3, 1834.

[It would be very gratifying, indeed, if the superior salubrity of our metropolis could be really attributed to the cause surmised by our correspondent: but the low rate of mortality in London is well known to depend on many circumstances which have more to do with medical police than medical practice; and it seems to us to afford at best but a *negative* proof of the efficiency of London practitioners.—Ed. Gaz.]

HOTEL DIEU, PARIS.

Case of Hypospadia; *with Remarks illustrative of the Treatment of that species of Malformation.*

By M. Dupuytren.

A child who laboured under a malformation of the urethra, was brought to the Hôtel Dieu in September last. The orifice of the urethra was placed about an inch and a half below the extremity of the glans: the latter was imperforate. When the urine flowed, it issued perpendicularly from the penis. The jet was small, and the evacuation incomplete and requiring an effort. The bladder was never perfectly empty, and the little patient could make water whenever he was desired. Such a position of the orifice of the urethra must render the individual unprolific: the semen could not be ejected towards the neck of the uterus; and for this reason, together with a desire to remove, if possible, the awkward condition of the parts, M. Dupuytren proposed to form an artificial prolongation of the urinary passage, so that it might terminate in its natural situation. His purpose was to effect this by the white-heat cautery *en roseau*, to be applied along the track of the urethra, from its extremity to its accidental opening. But the parents refused to permit the operation.

Hypospadia has been noticed by many of the more ancient surgeons, and various methods have been recommended by way

of remedy. The treatment must evidently be very difficult, if not impossible, when the opening in the passage is far below the glans; and it has sometimes been so low as to raise doubts as to the sex of the party — when, for example, the urethra opens in front of the scrotum, or in the perineum. Paulus Ægineta recommended that the end of the penis, beyond the orifice, should be amputated. Galen, Albucasis, Fabricius ab Aquapendente, and Dionis, advised that an artificial passage should be made through the glans, and a leaden bougie introduced and left there for some time. By means of small clean incisions, and bringing the lips together, cicatrization of the opening was effected, and a cannla remained in the passage till the cure was complete. But modern surgeons have been pretty generally opposed to any operation of the kind. Sabatier speaks positively against it; and Richerand agrees with him in thinking that any canal so formed must necessarily become obliterated. M. Dupuytren, however, who is of opinion that individuals affected with hypospadia are for the most part barren, has ventured to depart from the precept and practice of eminent authorities, and, in one instance at least, has had reason to be satisfied with his determination.

Twelve or fifteen years ago, a child, the heir of a rich family (much interested, of course, in his preservation), was brought to M. Dupuytren. Hypospadia was the complaint sought to be remedied. There was, at the root of the penis, a very small opening, by which all the urine passed slowly and with difficulty. From this point to the extremity of the glans there was no trace of an urethra. At the request of the parents, M. Dupuytren undertook a mode of treatment. He introduced a delicate trochar, from the anterior inferior part of the glans, along the track which a natural passage would follow, and pushed the instrument until it reached the accidental opening. He then cauterized the passage with the white-heat cautery *en roseau*. Very violent inflammation ensued, almost threatening gangrene; but by the proper use of antiphlogistics, this was subdued. An abundant suppuration followed. A gum-elastic catheter was introduced along the artificial passage, and continued into the bladder: it was kept there for three months. The accidental opening was several times touched with nitrate of silver, and was ultimately closed. The urine, at the end of this time, flowed freely by the new passage. But M. Dupuytren recommended that the catheter should still be employed, till the cure was complete and satisfactory. The child was then removed from Paris, and M. Dupuytren has reason to believe that every thing turned out successfully in the cure.

When hypospadia is carried to an extreme degree, it sometimes leads to strange mistakes, touching the sex of the individual. It constitutes a sort of supposed hermaphrodism, when its seat is in the perineum; the scrotum is then divided into separate folds, which resemble the labia, each of the folds containing a testicle; the penis, if not well developed, simulates the clitoris; and the opening of the urethra is taken for the orifice of the vagina.

M. Dupuytren knew a most curious case of this kind. A person affected with hypospadia was married for fifteen or twenty years, and during that period was treated as a female. Sexual intercourse was regularly effected by the canal of the urethra; nor was it till that length of time had elapsed that it was discovered the individual was a man.—*Journal Hebdomadaire.*

CASE OF EPISPADIA.

By Dr. Cramer.

In the autumn of 1828, during the levy of troops in Wesensee, I had an opportunity of examining a young man of 21, who had a remarkable malformation of the urinary organs. The urethra did not lie in its usual place beneath, but above, the corpus spongiosum, and was divided in its whole length from the arch of the pubes to its extremity: the penis was of the natural length. The mons veneris was wanting, but in its stead there was a reddish skin, covered with a sealy cuticle, and destitute of hair. Beneath the pubal arch there was an opening, into which a finger might be readily introduced, so as to reach the isthmus. The glans was also divided, and the rudiments of a prepuce were observable about its root. When the margins of the fissure were brought together by pressing them on both sides, they were found to coincide pretty exactly. There was nothing apparently amiss with the scrotum and testes: and the animal passions were energetic, though the young man denied that he had ever had any sexual intercourse. His parents were healthy people, and none of his brothers or sisters ever had any deformity that he was aware of. It should be added, that this person laboured under incontinence of urine; and for the greater convenience of emptying the bladder, was in the habit of generally wearing a petticoat instead of breeches. Does not malformation of this kind belong to the hare-lip and cloven-palate species: and might it not be cured by similar means?—*Medicinische Zeitung; edited by Dr. Hecker, of Berlin.*

KREOSOTE AND ITS PROPERTIES.

THE substance to which the appellation kreosote, or the *flesh-preserver,* is applied, is one of the latest-introduced therapeutic agents on the continent. To it, M. Reichenbach, its discoverer, and others, who have tried its efficacy in the treatment of cancer, syphilis, &c., would ascribe all that was formerly accorded to Bishop Berkeley and his tar-water—"every virtue under heaven." It is curious, by the way, that kreosote would appear to be the active principle of tar. We must of course be prepared to hear this new remedy forthwith cried up in all quarters, until it is displaced by something more new. Its chief property seems to be that *it coagulates albumen*; but all that is worth knowing with regard to kreosote, and the mode of obtaining it, is embodied in the following abstract from the Edinburgh Journal.

M. Reichenbach, of Blansko, has recently found in the products of the destructive distillation of wood, a new substance, which he terms Kreosote, from the Greek words κρέας and σωζω.

This substance is highly interesting, not only on account of its chemical properties, but from its useful application to therapeutics, domestic economy, and the preservation of provisions for long voyages. Two processes are given for its preparation: by the one the kreosote is obtained from pyroligneous acid, by the other from the tarry matter which distils over along with that acid. These processes do not differ much; both are tedious, but the latter method seems to be the easier. The tarry matter yields an oil by distillation, to which, after being rectified and heated, carbonate of potash is added, to neutralize the acetic acid associated with it. The acetate of potash separates, and the oil is again distilled, care being taken to reject the first products, and not to carry the distillation to dryness. The oil that comes over is then treated with a solution of caustic potash of sp. gr. 1.12; great heat is produced, and a portion of eupione, &c. formed, which floats on the surface. These are rejected, and the alkaline solution is slowly made to boil in an open vessel. A chemical action takes place,—it absorbs oxygen from the air, and assumes a brown colour. After it is cooled in the open air, diluted sulphuric acid is added until the oil is set free. It is again distilled with water, to which a little caustic potash should be added. The oil is then separated from the water in the receiver, and again treated with a solution of potash sp. gr. 1.12, boiled as before—cooled—treated with rather an excess of sulphuric acid—poured off from the sulphate of potash—well washed with water to carry off the excess of acid,—again distilled with water, to which a little phosphoric acid is added, to saturate the ammonia associated with the oil. Lastly, it is dissolved in caustic potash, and if the preceding operations have been carefully attended to, the kreosote and the potash unite, and the mixture, when heated, leaves no residuum of eupione, nor becomes brown by exposure to the air. The kreosote may then be separated from the potash by distillation, and, although not quite pure, is sufficiently so for medical purposes. The foregoing is a very imperfect outline of the process, which will be seen to be sufficiently tedious. The process will be found minutely described in the Annals of Schweigger-Seidal, vols. vi. and vii.

Kreosote is an oily, colourless, transparent liquid, possessing great refrangibility. Its odour is penetrating, disagreeable, and similar to that of smoked beef. It is of the consistence of oil of almonds, and has a sp. gr. of about 1.037 (68° Fahr.). It boils at 397.4° Fahr.; and is not congealed at a temperature of 16.6° Fahr. It burns with a smoky flame. It is a non-conductor of electricity. At 20° Cels. (68° Fahr.) it forms with water two different combinations, the one containing one-fourth part of kreosote in 100 parts of water, the other, ten parts of water in 100 kreosote.

This substance, when cold, forms two combinations with potash. The one is an anhydrous liquid, of an oily consistence; the other is a hydrate, and crystallizes in white scales. All the acids, not excepting carbonic acid, separate the kreosote from these combinations. With soda it forms combinations similar to those with potash. It has a great affinity for lime and the hydrate of barytes; with these bodies it forms compounds of a dirty-white colour, soluble in water, but which, when dried, assume the appearance of a rose-coloured powder.

Alcohol, ether, acetic ether, carburet of sulphur, eupione, and oil of petroleum, combine with kreosote in every proportion. Paraffine, though issuing from the same source with kreosote, has little tendency to combine with it. Indeed, the combination cannot be effected unless eupione be present, and is in a direct ratio to the quantity of eupione. Kreosote with difficulty dissolves caoutchouc, and only by the assistance of boiling, differing very much in this respect from eupione, which readily dissolves caoutchouc.

If to a solution of albumen in a large quantity of water a single drop of kreosote be added, the albumen is immediately coagulated. When fresh meat is put into a solution of kreosote, allowed to remain for half an hour, or an hour, then withdrawn, and afterwards dried, it may be exposed to

the heat of the sun without putrifying, and in the space of eight days it becomes hard, the colour changes to a reddish-brown, and the flavour is that of good smoked beef. Fish may likewise be preserved by it. It is pretty evident that kreosote is the anti-putrescent principle of pyroligneous acid and of wood smoke.

M. Reichenbach has ascertained that kreosote does not act upon pure fibrin, which by itself is said not to be susceptible of putrefaction. Its action upon the animal economy is deleterious. Placed upon the tongue it occasions violent pain, and when poured in a concentrated state upon the skin, it destroys the epidermis. Insects and fish thrown into it immediately die. Plants also perish when watered with it. M. Reichenbach has made experiments with this substance concentrated and diluted, and his success has surpassed his expectations. It has, he alleges, effected a speedy cure in cases of caries, of cancer, and of carcinomatous ulcers.

M. Schweigger-Seidal has made a comparative examination of kreosote, and the aqua Binelli, from which he has come to the conclusion, that the fundamental base of this hemostatic liquor is kreosote, of which it is only an excessively weak solution.

SIR CHARLES BELL'S DOCTRINE.

To the Editor of the Medical Gazette.

Sir,

As you object to any opinion in opposition to your statement of Sir Charles Bell's doctrine being given by an anonymous writer—the force of which objection I shall not dispute—I shall confine myself to the simple statement of facts which you overlook. I have but one object—that the truth should not be obscured. I repeat, that Sir Charles Bell has brought no proof whatever of what is called, in the above-mentioned account, the column of the spinal marrow for respiration being particularly connected with any particular set of muscles. He speaks as if there were a set of muscles exclusively employed in respiration; whereas the intercostal muscles and diaphragm are employed in numberless acts of volition, as well as for the purpose of respiration, in which, when it is impeded, the whole muscles of the trunk are employed. If such be the facts, Sir Charles Bell's doctrine is unfounded. The only points of consequence are—are such the facts, and how far is Sir Charles Bell's view of the nervous system affected by them? By whom this statement is made is a matter of indifference.—I am, sir,

Your obedient servant,

S. Y.

March 5, 1834.

[The statement of Sir C. Bell's views was not *ours*, but given in Sir C.'s own words.—Ed. Gaz.]

MEDICAL WORKS.

Medica Sacra; or, Short Expositions of the more important Diseases mentioned in the Sacred Writings. By Thomas Shapter, M.D. 8vo. 7s. bds.

Preparing for Publication. — A Treatise on the Diseases and Injuries of Bones. By Edward Stanley, Lecturer on Anatomy and Physiology, and Assistant-Surgeon to St. Bartholomew's Hospital. In 1 vol. 8vo.

Also, by the same Author, a Series of Engravings, intended to illustrate the Diseases and Injuries of Bones. In 1 vol. atlas 4to.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *March* 4, 1834.

Abscess	3	Heart, diseased	4
Age and Debility	86	Hooping-Cough	16
Apoplexy	11	Inflammation	68
Asthma	45	Bowels & Stomach	2
Cancer	1	Brain	5
Childbirth	8	Lungs and Pleura	12
Cholera	1	Insanity	8
Consumption	98	Liver, diseased	12
Convulsions	48	Measles	21
Croup	9	Mortification	3
Dentition or Teething	10	Paralysis	5
Dropsy	31	Rheumatism	1
Dropsy on the Brain	16	Small-Pox	7
Dropsy on the Chest	1	Spasms	2
Epilepsy	2	Stone and Gravel	2
Erysipelas	2	Stricture	1
Fever	18	Tumor	1
Fever, Scarlet	9	Venereal	1
Fever, Typhus	4	Unknown Causes	7
Gout	2		
Hæmorrhage	1	Stillborn	17

Increase of Burials, as compared with the preceding week . . . 98

METEOROLOGICAL JOURNAL.

Feb. 1834.	Thermometer.		Barometer.	
Thursday . 20	from 40	to 51	30·04	to 30·09
Friday . . 21	41	49	30·05	30·00
Saturday . 22	37	50	29·89	30 09
Sunday . . 23	41	51	30·31	30·13
Monday . . 24	43	51	30·14	30·23
Tuesday . . 25	36	49	30·33	30·35
Wednesday 26	28	51	30·35	30·25

Wind, S.W.

Cloudy, with rain at times on the 23d and 24th; otherwise generally clear.

Rain fallen, ·075 of an inch.

Thursday . 27	from 30	to 53	30·09	to 30·06
Friday. . . 28	42	51	30·05	30·12
Mar.				
Saturday . 1	44	53	30·14	30·19
Sunday . . 2	42	53	30·25	30·29
Monday . . 3	43	53	30·31	30·25
Tuesday . 4	42	52	30·10	29·97
Wednesday 5	46	57	29 74	29·50

Wind, S.W.

Except the 2d, 3d, and 4th, generally cloudy; rain at times.

Rain fallen, ·1 of an inch.

Charles Henry Adams.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 15, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XXIII.

LABOUR.

DUTIES OF THE MEDICAL ATTENDANT UNDER NATURAL LABOUR.

From what we have learned of the beneficence displayed by Nature throughout the processes of utero-gestation and labour; and of the admirable contrivances adapted to overcome difficulties and avert dangers; it will be evident that in a very large proportion of cases the duties of the obstetrician must be few and simple. Generally, indeed, no *active* assistance is necessary, until after the birth of the child; all that is required of the attendant being, that he should remain an observant, though unofficious, spectator of the process;—ready to exert himself, with promptitude and energy, on the first accession of any alarming symptom; but equally, or more ready, to allow the changes necessary for the completion of nature's object to proceed, uninterrupted by any meddlesome interference: for no maxim in midwifery is of more universal application, than that unnecessary "assistance,"—rendered with the view of expediting the termination of the case, or shortening the sufferings of the patient—is not only useless, but in the highest degree injurious, and well calculated to defeat its own end.

Let it not be supposed this declaration includes the admission, that a *partial* knowledge of the obstetric branch of medicine is sufficient for the safe practice of the profession; for although, in thirty-nine cases out of forty, little is required to be done beyond protecting the extended structures from injury, separating the child, and extracting the placenta from the vagina—after its total exclusion from the uterine cavity—still, in the fortieth, danger may occur, only to be arrested by the promptest, the most energetic, and most judiciously-directed help.

Much knowledge is necessary to discriminate the kind of cases in which assistance is proper, and determine the time at which that assistance ought to be employed, as well as the mode of its application:—it is this which distinguishes the scientific from the ignorant obstetrician;—it is this important knowledge on which the life, the future health and comfort, of many of your own individual patients will depend;—which by some members of the profession is held in such low estimation, as to be thought unworthy of cultivation by the scientific and literary mind;—unfit to be possessed by men of respectable station in society;—and the practice of which has been characterized, in an official document, under the seal of the highest of our medical corporate associations, as "*an art foreign to the habits of gentlemen of enlarged academical education.*" We can only feel surprise and regret that such a sentiment should emanate from so respectable a source; nevertheless, we cannot but forgive it, because it must proceed from an entire ignorance of the subject. Those members of the profession who hold such opinions, can surely never have seen the difficulties and dangers sometimes attendant upon labour; they can never have read of them, except, perhaps, among the miscellaneous articles of a periodical journal; or even heard of them, but as rare, wonderful, and extraordinary events, the subjects of vague conversation. They can neither have studied the principles of the

science in the eloset, nor the application of these principles at the bed-side. For, to say nothing of the knowledge and judgment requisite to treat such perilous accidents as hæmorrhage, in all its varieties, and convulsions; a most important question,—involving no less than the destruction of fœtal life,—is often painfully forced upon the attention of the obstetrical practitioner. He is by no means very unfrequently called upon to decide whether the delivery can safely be trusted to the natural powers, or requires to be terminated by artificial aid: and whether means may be used compatible with the child's safety; or the horrible alternative must be had recourse to, of sacrificing the infant to preserve the mother. Is it of no importance that this should be determined by an educated, intelligent, and *practical* man? Is it right that questions of such vital interest should be left to the decision of one but *partially* qualified to answer it?—And can we suppose that any person can form a proper estimate of the powers with which nature is endowed to surmount the impediments, and overcome the dangers, that occasionally embarrass parturition, unless he have the opportunity continually before him of watching her operations in the more ordinary cases? For these, if for no other reasons, the interests of the public must be best protected by the obstetrical branch of medicine and surgery being undertaken,—in common with the other duties of those sciences,—by persons who have qualified themselves, by their medical studies, for the conduct of the most dangerous casualties, and who are entitled, by their rank in society, and their preliminary education, to the consideration of gentlemen.

How preposterous and unjust is it, that men holding a high rank in the profession, both of medicine and surgery,—and who, from their talents and acquirements, have deservedly obtained the confidence of the public, — should constitute themselves judges of the value of the obstetric branch of those sciences; when, by their own confession, they have disdained to make themselves aequainted practically with the functions of the female generative system, under the convenient but false assumption, that the practice of midwifery would be a degradation to their high professional charaeter! And how much more preposterous and unjust is it, that the same persons—for these very reasons incapacitated from forming an opinion—should endeavour to underrate the importance of this department of physic, and lower it in the estimation both of the profession and the public!

It is frequently urged as an argument against the necessity of studying midwifery, as a seienee, that practical experience alone can give any man an adequate knowledge in the performance of the different obstetrical operations; and that, therefore, to listen to the details of the mode of performing those operations, is time absolutely thrown away; but the same objection would apply, with equal force, to surgery itself. True it is, that manual dexterity cannot be acquired by description; but the cases in which interference is necessary, the mode of applying the different powers in our possession, and the time when our assistance becomes serviceable, may be learnt by studying the principles of the science: and you will find this knowledge avail you in practice equally with, if not more than, manual dexterity itself.

In the recommendations which I shall think it my duty to inculcate, it may be thought that I am needlessly trifling your time away, by entering into minutiæ of little importance—unworthy to find a place in a series of disquisitions on any science, or even practical art;—but I beg you will understand that my observations, although addressed to you collectively, are intended principally to apply to those who are now entering on their studies for the first time. And be assured you will soon discover, that on many of these *trifles* the present comfort and future welfare of your patient may in a great measure be dependent.

Necessity of immediate attendance.—I would most strongly advise you to let every other duty give way to attendance on a case of labour, and to answer the summons immediately; for even should it happen that you have attended the same patient in a previous labour, which proved lingering, you are not to take it for granted that her subsequent cases will be equally so. The length of the labour may have been consequent on rigidity in the former instance; but the probability is, that on after occasions such a cause will not exist. That practitioner would subject himself to much annoyance and blame, who, remiss and negligent in obeying such a message, found the case terminated when he arrived. It is always desirable—however little is required to be done—that the medical attendant should be present during the principal part of the process, that he may be at hand to employ such means as any emergency may render requisite.

Instruments necessary to be provided with.—It is not desirable that we should *harness* ourselves, if I may use the expression, with the full complement of our obstetrical instruments; but there are some which it is quite necessary for us never to be without. Of course, as *surgeons*, you will always have a lancet in your pocket; as *obstetrical* surgeons, I would recommend you also to carry

with you a female catheter; and if you practise in the country, never to be without a drachm or two of laudanum. Some practitioners invariably carry with them a little of the ergot of rye; but I would recommend you to leave that drug at home; or, at least, never to forget that, if it possess the powers attributed to it—of which in some instances I have not the least doubt—and if, possessing those powers, it be employed in a case unfitted for its use, it may be productive of the most serious injuries. Recollect, it must never be exhibited for your own convenience;—never with the view of expediting the delivery;—but is only to be had recourse to when the *sole* cause of delay is insufficiency of uterine action; or under some peculiar species of floodings. To meet the latter emergency alone, indeed, is its reception into your pocket-case, as a principle, admissible. The dangers likely to arise from its employment, and the cases in which it may with safety, and perhaps also with advantage, be used, will be more particularly adverted to hereafter. Others furnish themselves with a vectis on all occasions; but the objections referrible to the ergot apply here with even greater force;—this instrument is much safer in your drawer than in your pocket; since you might possibly,—provided you had it with you,—be tempted to make use of it unnecessarily, and consequently injuriously.

The patient's room should not be entered immediately.—If you are not well acquainted with your patient—and it is not unlikely that you may be called to a lady whom you have never had an opportunity of seeing professionally—or even should you have attended her on previous occasions; you should not obtrude yourselves immediately into her presence, unless there be some urgent necessity for your attendance. You had better retire into another room, and inquire of that important, but often troublesome and mischievous, appendage to the lying-in chamber, the nurse,—(who in the absence of the medical man, at least, and sometimes even in his presence, sways an undisputed sceptre in that chamber)—how long the patient has been ill; how often the pains occur; whether there is any shew or sickness; any irritation of the bladder or the rectum. By this means you gain some little information as to how the labour is advancing; or whether it has really commenced. It is very possible—especially if your patient have been much indulged in her earlier days, and be in labour with her first child—that she may shew some irritability, or petulance of temper, on being informed you are in attendance; she may send some message which, under other circumstances, would be considered insulting: you may perhaps overhear her say, that you had better go home; that she does not want to see you, and never will admit you. It would be wrong for you to take her at her word; you will be acting more wisely by tarrying in the house, if, by the description of the nurse, you think it probable your presence will soon be required. Make yourselves, then, as comfortable as you can, and construe the lady's *never*—as a lady's "never" under other circumstances often does—to signify only just so long as she remains in the same mind: for you may be sure, as the pains increase in frequency and strength, she will not only be persuaded to admit you, but herself call loudly for your assistance. It happened to me within the last week to be called in the forenoon to a lady in labour with her first child. After much persuasion I was allowed to make an examination *per vaginam*, and satisfied myself that labour had commenced, and that the head was presenting. As my immediate presence was not required, I saw her occasionally in the course of the day; and towards evening was again summoned. The uterus was now acting vigorously; but on my proposing to inquire how the labour was advancing, she would by no means permit me to make a second examination, and positively forbade my remaining with her. Observing, however, that the pains were urgent, I sat down to write at a table in her chamber; and had not been in the room a quarter of an hour, before she began to call upon me to "assist" her. I now found the head had entered the pelvis, and was beginning to press upon the perineum: from this time she would not allow me to leave her bedside for one moment; and I remained for two hours with my hand protecting the extended structures; and received afterwards the most earnest expression of her thanks for my disregard of her wayward conduct. Such cases you will, no doubt, be constantly meeting with in practice.

Having been ushered into the lady's room, it is better not immediately and abruptly to proceed *to business*, but to sit down quietly by her side; to inquire after her general health; how long she has been ill; how she has felt during the last few days; and to coax her into some general conversation. By this means she will become familiarized with your presence in her chamber; and you will learn whether there be pains, how long they continue, and how frequently they return. This knowledge you may acquire from the alteration in her manner, even although she utters no complaint. If the patient, however, be in active labour, it is an imperative duty not to let much time elapse before you require to make an internal examination.

It is very probable that an objection may be raised by the patient to this examination, when first requested to permit it; under the idea that no "assistance" can be rendered so early in the labour. As I would regard the feelings of a parturient woman in a degree only secondary to her safety, I would by no means insist on putting her to this inconvenience, unless I thought it absolutely necessary. But as I know what valuable information may be obtained under this first examination;—how desirable it is that this information should be gained, at least during the progress of the first stage;—and that time once slipt by can never be recalled;—I think it right, in every case where my request is objected to, firmly, but gently, to urge its propriety: and—as I take upon myself the liberty of constituting myself the sole judge of the necessity—I would rather, on principle, not remain in the conduct of any case, unless my suggestions were acceded to.

In requiring to make this examination, much delicacy must be used. It is not fit that we should adopt the common phrase of the lower classes, and desire to *try a pain*, or *take* a pain; these are expressions which should never escape from the lips of a well-educated gentleman: but let us tell the nurse to persuade her mistress to lie down upon the bed, *that we may ascertain how far the labour has advanced,* and *whether every thing is natural.* It is very seldom that we cannot, with a little management, persuade our patient of the necessity and propriety of submitting to this inquiry.

Information to be acquired by an examination.—Much important information, then, is to be gained by the first examination. We must learn, *first*, whether the patient is pregnant; *secondly*, whether she is in labour, if she be pregnant; *thirdly*, how the child is presenting; *fourthly*, whether the membranes have ruptured, or are still entire; *fifthly*, how far labour is advanced; and, *lastly*, we must endeavour to form some calculation as to the time that will elapse before the termination of labour. Now all this knowledge, except with regard to the probable duration of the case, can be obtained during the first examination per vaginam.

It may perhaps be thought superfluous that I should advise you to ascertain whether the patient be pregnant. Cases, however, have occurred, where professional gentlemen have been in attendance hour after hour, for days and weeks; and after all it has turned out that the uterus was unimpregnated: they have thus rendered themselves liable to some censure,—or, what is perhaps more mischievous than direct censure,—to quizzical innuendos and sarcastic ridicule. Women,—especially those advancing in years,—will sometimes deceive themselves, or allow themselves to be deceived by others, on the subject of pregnancy; and if you have never seen your patient before, or not perhaps for many months, you can have no opportunity of knowing whether she be pregnant or not, except from your own observation at the time. Many unhealthy actions may cause the abdomen gradually to swell, and simulate the appearance of gestation; and spasms of different muscles may sometimes tolerably closely imitate—as to sensation, situation, and severity—the commencing pains of labour. It happened to me to be called twice to the same woman, with an interval of eighteen months between the summonses;—in labour, as I was informed: she was on each occasion surrounded by her female friends, and attended by her nurse; the baby linen was prepared, and hanging by the fire; the toilet-table dressed, with "welcome little stranger" figured in pins on the chamber pincushion; the gruel simmering on the hob; the liqueur bottle, retiring from common observation, appeared to hide itself in a far corner of the room, ready to revive the spirits of the nurse after the fatigues of her duty were passed, or her mistress' perhaps, when the doctor's back was turned: all the common requisites of the lying-in room were scrupulously in readiness; one little point only was wanted to complete the scene, and render my patient a happy mother, and that was, that she should be pregnant. This, however, happened not to be the case: of course I retired; and in two senses, if levity may be allowed on such a subject, I might be said to have *lost my labour*.

Provided the patient be not pregnant, the deception may generally be detected, simply by placing the hand on the abdomen; but if that proceeding does not afford the required information, an examination per vaginam can scarcely fail to prove satisfactory.

When you examine the abdomen, you will probably find it distended, from flatus pent up in the intestines, or from fluid effused into the peritoneal cavity, or from the presence of some more solid tumor. You may distinguish that the swelling is softer or harder, larger or smaller, more diffused or more circumscribed, than is the bulk of the gravid uterus: that it is not of the same shape; is perhaps irregular on its surface; does not occupy the same position; and, above all, that it does not possess that peculiar springy elasticity which so strongly characterizes the impregnated womb at the end of the natural term of gestation. But if there be any doubt in your mind, it is right to make an examination per vaginam. Under this

state of spurious pregnancy, you will find the os uteri not only close, but undeveloped; the cervix uteri not expanded; and the uterus itself, on poising it at the extremity of the finger, will be felt small, light, and moveable, provided it be not diseased. If, on the contrary, the patient be pregnant, and near the end of the term, we shall find the os and cervix uteri fully developed and expanded, and perhaps the os uteri somewhat open. We may be able to detect the body of the fœtus through the dilated mouth or expanded neck.

But the patient may be pregnant, and not in labour; the pains may be spurious, and not true. If you bear in mind what I before advanced respecting false pains, you will, I trust, be able to distinguish between them. I need not say that generally you will find your patient, in the first stage of labour, experiencing the dilating or *grinding* pains.

Women have the idea, that under every examination which we make during labour, we materially assist them, and expedite the termination of their sufferings. This false notion is productive of much injury; since it often leads both the patient and her friends to urge on the medical practitioner the necessity of constant, close attendance, at the bed-side; frequently to the retardation, and perhaps to the interruption or subversion of the whole process: and these solicitations are usually advanced with a fervency that it appears the extreme of cruelty not to accede to. We cannot, nor ought we to attempt to render any assistance, if every thing be progressing properly. The assistance we afford by this examination is negative at best; it merely consists in the acquisition of knowledge; the ascertaining of facts necessary and highly valuable for us to be acquainted with, that we may regulate our conduct accordingly. It is very possible that the child may be transversely placed, or some other less important malposition may require a trifling operation before the termination of labour; and we are prepared, when we have gained this information, to act at the moment which is most serviceable. It is highly injudicious, then, to delay gaining the information we seek, which we can only do by an examination *per vaginam*.

Arrangement of the bed.—Before, however, I proceed to consider the mode in which the examination is to be made, it is right that I should say something about the position of the patient, and the general arrangement of the bed. It is usually the nurse's duty to prepare the patient's bed; but often you will find nurses very stupid, and sometimes very obstinate; and occasionally you may be called to a patient who has not the questionable advantage of a professed nurse's assistance; you may then be obliged to prepare the bed yourself. Again, it not unfrequently happens that a nurse will ask the medical attendant, especially if he be a young practitioner, or if she have any doubt about his abilities, (for nurses, as well as other people, will take the liberty of forming opinions on subjects with which they are perfectly unacquainted), how he would like to have the bed guarded; that she may learn whether he is acquainted with her part of the duty, presuming that if he is ignorant of hers, he will know as little about his own. She will then insinuate, in his absence, that he is inexperienced and unqualified; and I need not tell you how easily the female mind is biassed by the confident assertions even of the most ignorant. For these reasons, we will devote a few minutes, even at the risk of its being thought *infra dignitatem*, to consider the appointment of the bed.

In many parts of the continent, even to this day, women are delivered in the half sitting and half recumbent posture. The patient, then, sits, half inclined, in an easy chair, with her legs extended; and the doctor places himself in front. This may be a convenient posture, but it is certainly not a very decent one. In "Raynold's Byrthe of Mankinde," before noticed, which was published in 1540, there is a rude engraving of "the woman's stoole," consisting of a chair, having an inclining back, and a large semilunar aperture in the front of the seat; and stated to be in common use both in France and Germany. It is still the custom, I believe, in some parts of Ireland, for the woman in labour to place herself on her elbows and knees. In this country, the patients are delivered on their left side, and on the bed. In the better ranks of society, the lady usually has on her night clothes; the mattress or feather bed having been previously guarded by a skin of dressed leather; one or two blankets are folded over the skin, and above that the sheet is spread, on which she lies. But in the lower ranks of life, women are in the habit of being delivered on the lower end of the mattress. The bed is arranged as if the patient were to be placed in it, and is then, with the superincumbent strata of sheets and blankets, turned up at the bottom, and doubled upon itself towards the head; so that there is a space at the lower part of the bedstead, occupied only by the mattress. On this space, if the patient possess a dressed leather, it is spread; if not, the mattress is protected by three or four folds of blanket, and the patient retains her ordinary dress, perhaps even to her stays. It is much more convenient for the woman to be undressed, and lie in bed, because then there is little annoyance from

the change of linen after labour, and she may be removed quietly, and without much disturbance, from that side on which she was reclining to the opposite, which is perfectly clean.

Choice of a lying-in room.—In the higher circles, the medical man is sometimes asked to choose the room in which the patient shall pass the month of her lying-in; and if we have this advantage we should select one that is large and airy, and which has a dressing-closet attached to it. But in the ordinary ranks of life he is not referred to, and the patient is generally delivered in her own bed-room.

Attendants present during labour.—It is proper also that we should have some voice as regards the number of attendants who are to be present during the labour. Keeping in mind that the room should be as quiet as possible, there are yet some attendants whose services we cannot dispense with. The only persons whom I allow to remain in the patient's chamber, if I have the entire management, are myself, the nurse, and a female married friend—the mother, some other relation, or an intimate acquaintance, to act as a confidante; who will sympathize with the patient—into whose ear she may whisper all her grievances and distresses—and from whom she may receive those nameless comforts and sustaining consolations of which she so eminently stands in need. Unmarried females are neither the most fit companions for the patient nor the most useful assistants to the practitioner. In addition, however, to the persons just mentioned, I always require that a servant should be in attendance in an anti-room, or close at hand, that she may be ready to attend the bell immediately, in case hot-water or any other necessary be required from a distant part of the house; and that she should have no other duty imposed on her for the time except an obedience to the orders that may issue from the lying-in chamber.

Obstetrical dress.—Nor will it be deemed impertinent if I say a few words about an obstetrical dress. Some of the older obstetricians, I have heard, were in the habit of carrying with them an apron and a pair of sleeves; and I have seen others take the nurse's apron off, and tie it round their waist, so as to make them look more like barbers than gentlemen. It is in a great measure such unbecoming practices as these that have tended to draw upon the obstetric department of medicine and surgery the undeserved obloquy, under which it has so long laboured. It is very much the custom, even among the better ranks, to require that a napkin should be fastened round the arm. A small napkin is folded into a triangular shape, twisted by the nurse round the attendant's wrist, and secured by a pin, so that the dress may be perfectly protected. I have not the same objection to this means being employed that I have to a regular apron and sleeves; but still I think it unnecessary, and would wish that any thing which adds to the mystery or peculiarities of the profession should by all means be avoided: as far as I myself am concerned, therefore, I invariably dispense with the officious attention of the nurse, on all occasions of the kind. At the same time it is necessary, both for the sake of comfort and appearance, to be a little careful of our dress; for no gentleman would like to appear slovenly, or carry about with him visible, and perhaps not very elegant or refined, marks of his profession. Such accidents may be obviated by having a longer slit than is usual cut in the sleeve of our coat, so that it can, without inconvenience, be turned above the elbow; the shirt may then be more or less rolled up, a napkin may be loosely thrown over the hand and arm, and there is little chance of the dress being soiled. This may be done without the appearance of bustle or preparation; and before the arm is withdrawn from under the bed-clothes, the coat may be again brought over it. Thus neither will delicacy be offended, nor an idea of mystery imparted.

Obstetrical position of the patient.—Now, provided the woman be in labour, which I shall take for granted is the case, we have particularly to learn how far the os uteri is dilated or dilatable; whether the membranes are ruptured, and how the child presents: and the following is the mode by which we obtain this information. The bed being prepared in the way I have just mentioned, the patient is to be laid on her left side, with the shoulders inclined a little forward, the thighs bent up towards the abdomen, and the legs turned back rather upon the thighs. We usually observe that the nurse places the woman with the shoulders thrown backwards, so that an obtuse angle is formed at the junction of the pelvis and thighs: this position is inconvenient, and should always be rectified. The great advantage which we gain by making an acute angle at the bend of the hips, is that we give the lumbar vertebræ an inclination outwards, and bring the axis of the pelvic entrance into a more direct line with the axis of the trunk of the body. Whether, therefore, we pay any attention to the arrangement of the bed or not, it is quite necessary that we should superintend the position in which the patient places herself; as the value of one posture over another can only be appreciated by those acquainted with anatomy. If she assumes an awkward position on the onset of labour, we shall have great difficulty in getting her to change it; but

if at first she be put in that posture in which she is to be delivered, she will always return to it whenever we require her so to do. Being placed, then, on her left side, with the shoulders thrown a little forwards, the pains coming on every five or six minutes perhaps, we sit down by her bed-side, our person being rather behind her; and having anointed the first finger of the right hand with some unctuous substance—such as lard, pomatum, or oil—we pass the hand under the bed-clothes, and, placing the two first fingers on the labia externa, we separate them, and introduce our first finger into the vagina in the direction of its entrance, which is a little backwards and upwards; or we may slide our finger along the perineum, from the anus to the fourchette, and insinuate in that manner. I need not again repeat that this must be managed with the utmost delicacy such an examination is susceptible of. Having passed our finger as high into the vagina as we conveniently can, we turn the wrist round, so that the junction between the two fingers shall fit in under the symphisis pubis, and we have a perfect command of the vagina and almost of the whole pelvis.

It is usually the practice to make this examination during the time the pain is urgent; and it is this circumstance that has given rise to the observation of "trying a pain." It is, however, on many accounts, desirable that we should not introduce our finger up to the os uteri during the acmè of painful sensation; because then the membranes are protruded into the vagina, and if we press against them at that moment we may possibly rupture the cyst, and lose its advantage in the after progress of the labour. It is also better that we should not make our examination during the time of pain, for another reason: because we cannot then so well ascertain what is the presenting part, in consequence of the quantity of liquor amnii which is interposed between the child's body and our finger. Nevertheless, inasmuch as it is expected that we should examine while the uterus is acting—and, indeed, as in many cases the patient would not allow us to pass our finger at all, were it not for the belief that we can assist her, and that only during the time of pain—it is necessary that we should request her to let us know when it returns, and take that opportunity of introducing our finger within the external parts. Having gained this advantage, we must allow it to remain inactive in the vagina while the pain continues, and upon its cessation, which we have seldom any difficulty in ascertaining, we may pass it up to the os uteri for the objects already mentioned—viz. to learn whether the labour has commenced—whether the membranes are ruptured—whether the head of the child presents—and what degree of relaxation the os uteri, vagina, and perineum, have already taken upon themselves.

With regard to the first of these requisites, it is not always very easy for a novice to distinguish the os uteri at the commencement of labour: I have known many students attend a number of cases before they have been able to satisfy themselves whereabouts the os uteri was, or detect it by the feel. But you will generally find it looking backwards towards the hollow of the sacrum, about two inches, or two inches and a half, from the vulva, and dilated to the size of a shilling, a half-crown, or more, as the case may be. In these obstetrical tables [presenting them], by Spratt, contrived upon the ingenious plan of Hogben, you will observe the mode in which it is recommended that an examination should be made, either with the first finger of the right hand or two fingers of the left. In the first representation, the os uteri is open to the diameter of about a sixpence; in the second, to the size of half a crown; in the third, it is almost entirely dilated—the membranes being protruded into the vagina; and in the fourth, you see the situation of the child after the membranes have ruptured.

Examination of the membranes.—Having satisfied ourselves, then, that we positively feel the os uteri, let us next ascertain whether the membranes are ruptured or not. It is not always very easy to determine this point either when the patient is free from pain, because the membranes being flaccid, retreat, together with their contained waters, within the os uteri, and there remains merely a thin skin, as it were, between the finger and the presenting part of the child; so slight, indeed, as scarcely to be perceptible to the touch. But as soon as the pain returns, the soft wedge is again felt protruding externally through the os uteri, and there is then no difficulty in detecting them, if unbroken. The finger, as I have just said, should be introduced when the pain comes on, allowed to remain passive in the vagina, and only carried up to the os uteri on the cessation of uterine action: but if, under this examination, we cannot positively assure ourselves whether the membranes are ruptured or not, we may take an opportunity of examining when the next pain comes on; passing our finger up most carefully, lest we should rupture the sac prematurely;—and if we distinctly feel their protrusion, we know that the membranes are still entire.

CASES OF

GUN-SHOT INJURIES OF THE EYE.

By John Butter, M.D. F.R.S.

Physician to the Plymouth Royal Eye Infirmary.

To the Editor of the Medical Gazette.

Sir,

Your inserting the following interesting cases, which were obligingly drawn up by Dr. Butter at my request, I shall consider a favour.—I am, sir,

Your obedient servant,
W. Mackenzie, M.D.

Glasgow, Feb. 5, 1834.

Case I.—*A duck-shot impacted in the Optic Nerve for above six years.*

Mr. H———, aged 50, came from Camborne, in Cornwall, and first consulted me at Plymouth, in Sept. 1830, on account of total blindness in his left eye, accompanied with very great pain occasionally, and considerable amaurotic affection (photopsia) of his right eye. He gave the following history:—On the 19th February, 1827, while shooting, a gun was fired at a woodcock by another person, and a shot lodged in his left eyeball, producing instant blindness. For a fortnight afterwards he did not suffer greatly; but during the last four and a half years the pain would flash so suddenly and intensely, at times, through his left eye and head, and so seriously disturbed the visual functions of his sound, or right eye, that, in whatever occupation he was engaged, his sufferings obliged him to desist for a time, to apply leeches, and resort to other remedial measures. The fear of losing also the sight of his sound eye from sympathy, added to the actual pain felt in his left, induced him to seek, and even to urge, the extraction, if possible, of the shot, which he knew from his acute feelings must be seated in some very sensitive part of his left eye.

The following appearances were exhibited:—His left eye was rather less in size than his right, but free entirely from inflammation. On the nasal side of the eye-ball a fistulous opening was perceived through the reflected conjunctiva and sclerotica, nearer to the iris and cornea than the spot at which we usually introduce the needle in depression. I could pass a fine gold probe through this opening, nearly into the posterior chamber; it was evidently the entrance of the shot. The iris was not materially altered. A cataract behind it could be distinctly seen.

In a consultation with my colleague, the late Mr. J. H. Luscombe, one of the surgeons to the Plymouth Eye Infirmary, we agreed at first to dissuade Mr. H. against an operation, or any attempt to search for a shot, the position of which was extremely doubtful and uncertain; but it was the wish of our patient that some trial should be made.

On the 9th September, 1831, aided by Mr. Luscombe, and Mr. Lanyon, jun., a very promising young surgeon from Camborne, and Mr. H.'s medical attendant, I extracted the cataract, which consisted of calcareous matter and spiculæ of bone. I afterwards syringed out some gritty matter from its bed. We all hoped that the removal of this bony lens might have been followed with corresponding relief, thinking that the ciliary processes had been irritated by its pressure and hardness, in such a manner as to account for the principal symptoms. In this hope and expectation we were disappointed; for on 23d February, 1833, Mr. H. came back to Plymouth, having returned from hence to his home on 6th October, 1831 (twenty-seven days after the first operation), and requested me to make a farther attempt for the removal of the shot, which his feelings denoted still remained within his eye, and caused those sympathetic sensations (amaurosis) in his right eye, the sight of which being now endangered, he was most anxious to preserve. He pointed to a blueish and prominent part of his left eye, underneath which he considered that the shot must be lodged. Indeed, this idea seemed very probable to myself, and to my brother, a surgeon at Sympstone, then on a visit here, who assisted me in hooking up this prominent portion of the sclerotica, which I excised with the scissors, and made an aperture sufficiently large to enable me to explore with the probe the internal concavity of the eye, and to allow the exit of the vitreous humour. Still no shot was found. It is needless to say, that this second operation disappointed us all; but Mr. H. determined to have his whole eye extirpated at a future period, should not

his complaints be alleviated by the suppuration which followed this other attempt.

At his request, on 23d September, 1833, I removed the whole of his left eye-ball, with its lachrymal gland, and divided the optic nerve far back in its socket, close to the foramen opticum, fearing that I might still miss the object of our pursuit. On dissection afterwards, I had the greatest satisfaction to find a duck-shot, impacted so firmly in that part of the optic nerve which expands and forms the retina, that a considerable effort was required to detach it from its bed, in which it must have been fixed *for six years and six months*, closely embraced by the nerve. Such was the patient's extreme fortitude and perseverance, that not even was his hand raised, nor a syllable of complaint uttered, during this most painful operation, in which I was very kindly assisted by Drs. E. Moore and Rendle, the present surgeons of the Plymouth Eye Infirmary, and also by Mr. Square, a very intelligent pupil of the same. The preparation of the shot, *in situ*, I have preserved for my own collection.

At the end of a fortnight the patient was nearly well; but for three weeks afterwards he was detained by adhesions which formed between the lids and subjacent parts, and which I repeatedly divided. Some morbid sensations were felt in the ophthalmic branch of the fifth pair of nerves, and also in the ramifications of the superior maxillary, resembling *tic douloureux*, which I trust the carbonate of iron, taken in large doses, and vinum opii applied externally, will effectually remove. Mr. H. returned from Plymouth to Camborne on the 9th November, 1833 (about forty-seven days after the third operation.) In his last letter he writes that the strength of his right eye increases daily, and that the neuralgic complaints in his face also decrease. A glass eye has been fixed in, to correspond with the other; but the parts are too tender yet to bear it*.

CASE II.—*Sudden Blindness from the supposed rebound of a grain of shot off the Eye-ball.*

On the 1st September, 1830, I was sent for to visit T. R., Esq., æt. 41, living at Venn, near Tavistock, about fifteen miles from Plymouth. During my absence, Mr. Luscombe, one of the surgeons to the Plymouth Eye Infirmary, went over to see him. Mr. R. had the kindness to call upon me on the 23d December, 1833, and at my request to explain the particulars of his case in the following manner: — Whilst shooting partridges on the morning of the 1st September, 1830, he received in his left eye a shot, a part of the contents of a fowling-piece, fired by a young gentleman, through a thorn bush in a hedge, at a partridge. Three shot holes were made in his hat. The immediate effect to him was a sensation like a flash of fire or lightning, quickly followed by total blindness, and very considerable tumefaction of the left lids and eye. The anterior chamber was soon filled with blood, which produced a red appearance resembling the colour of a ferret's eye, or rather of a Mazard cherry. Mr. R. was conveyed home, and blooded three times on that night, and about thirty leeches were applied to the swollen parts and temple; so that neither any serious inflammation nor pain followed the accident from that time to the present. The effused blood in course of time became absorbed, and with it some portion of the vitreous and crystalline humours, as the left eye is perceptibly diminished in size. The transparency of the cornea, however, is preserved, with the form of the eye; but the iris is altered to a tawny colour, corrugated at its margin, and agglutinated to the capsule of the opaque lens. Not the least light can be discerned with his left eye; but fortunately its defects have not at all interfered with the vision of his right, or sound eye; on the contrary, he thinks he can see objects at a distance more

* After Dr. Butter had kindly communicated to me the above case, I was anxious to know some farther particulars concerning it; and especially whether it appeared that the shot had passed directly through the coats of the eye, and vitreous humour, to the optic nerve, which it had entered in the line of its axis; or that the shot had traversed his eye, making its exit at the back part of the sclerotica, and then entering obliquely into the nerve, after passing through the cellular substance of the orbit. Dr. B. replied, that the shot was very little altered in its form—a little indented with a sharp point or two; that its extraordinarily firm attachment was surprising; that there appeared to have been no suppuration, nor disposition to ulceration; and that the shot must have entered the sclerotica near its junction with the cornea, on the nasal side, passed beside the crystalline, and through the vitreous humour, to the optic nerve, where it perforates the choroid coat. —W. M.

clearly than he ever could do. There is an indentation in the sclerotica, which I think arises from a diminution in the size of his left eye, and not upon any wound or aperture ever existing there. His feelings do not give the least intimation of any foreign body in his eye; and his wonder is, where the shot could have entered, or where it can now be lodged. The most extraordinary part of this accident is, that no person should ever have been able to discover any precise spot at which a shot could have entered the eye-ball, nor the side it could have struck. Some surgeons have conjectured that the optic nerve was divided by the shot, and that its division would account for the suddenness of the blindness, and absence of pain; whilst others imagine that the shot must still be lodged in the adipose and insensible parts of the orbit, or in the bones; but the most probable supposition, in my opinion, is, that no shot ever penetrated through the coats of the eye, but merely struck violently against the eye-ball in an oblique direction, and bounded off, bruising the external or temporal side, and bursting some blood-vessels in the iris and retina within the eye, which immediately effused blood, the colouring particles of which being absorbed, a dense coating of lymph remained, became organized, and rendered the retina opaque and insensible to light.

CASE III.—*A full charge of shot received in the face—Confusion of Vision.*

So far back as the year 1814, a gentleman, æt. 33, travelled from Blackburn, in Lancashire, to Plymouth, to consult me respecting his eyes. Six years before, he had received in his face the full charge of a fowling-piece, ostensibly fired over a hedge at a partridge, by a near relation, who, there were subsequent reasons to fear, had designed to do him this mischief through base and interested motives. Shots had penetrated different parts of his face, and one had evidently entered the upper part of the sclerotica of his left eye, about two lines from the iris; but it did not appear that his right eye had been wounded. For many days after this accident he continued quite blind, owing to the swelling of the integuments of his face. The right eye could be opened first, and the light of a candle faintly seen with it; but with the left eye, opened two or three days afterwards, nothing could be seen. The sight of his right eye returned so far as to enable him to read and write a little, and to walk about; but that of the left scarcely returned in any degree for six months, when, strange to relate, it began to improve, and even to surpass the sight of his right eye, which, equally strange to say, began then to decline, and to confuse his vision altogether.

From that time every object appeared to be confused and double (diplopia) when both eyes were opened, but only single when one eye was closed; and always more obscure to the right than the left, especially in an evening, when his vision is much better with his left or injured eye, than with his right (hemeralopia.) All the parts of his right appear natural; but the iris of his left was torn at its upper margin, and rendered perpendicularly oblong instead of circular. The shot pierced the sclerotica about two lines from the iris, which was torn, but neither injured the lens nor its capsule. Belladonna acted more freely on the injured iris of the left than on the right. After dilatation with belladonna, the irides took a long time to contract to their proper form. Both lenses were transparent. The vitreous humour looked blueish in both eyes. On looking at any one object, two always appeared—viz. the original, seen with the left, or injured eye, in its relative position and proper distance; and the shadow, much nearer, and always to the left of the proper spot, when viewed with the right eye alone. If he looked at a river, a fire, a burning candle, or any luminous body, the effect was the same. A person passing in the street looked like two—natural when viewed with the left eye, but faintly represented and misplaced with the right. This confusion often caused him to run against people. He remained at Plymouth about three weeks, under my care, and returned to Lancashire with his left eye somewhat improved.

CASE IV.—*Piece of a copper cap struck into the Eye—Extraction—Cure.*

Mr. K., jun. accompanied by his father, a highly-respectable surgeon at Devonport, came to my house, in Plymouth, about nine o'clock, A.M., on Saturday the 16th May, 1829, on account of an accident which had happened to

him about an hour before. In blasting off a gun, a piece of the copper cap with which the patent lock was charged, flew off, and struck into the centre of the cornea of his left eye, in front of the pupil, fixing itself between the laminæ, from which I considered at first there could be no great difficulty in removing it. During his father's absence from my house, not exceeding fifteen or twenty minutes, in fetching some instruments from the Eye Infirmary, the piece of copper had cut its way entirely through the cornea, and floated to and fro in the anterior chamber, falling occasionally to the bottom with some aqueous humour, a part of which had escaped through the wound, and the cornea itself became flaccid. Instead, therefore, of a simple, I now prepared for a very difficult operation, and found the task of perforating the collapsed cornea, with an extracting knife, by no means easy.

When I had made a section, the piece of copper became wedged between the cornea and iris, then brought into contact, and was lost out of sight for a time amidst the fibres of the iris, from which, after repeated trials with different instruments, I extracted it with the forceps, and drew out likewise some portion of the fibres of the iris, entwined around a hooked corner of the copper. (*See* fig. 1.) Some part of these fibres I snipped off, and replaced the rest with as much care as possible, closing the incised lips of the cornea over the same. After so tedious and painful an operation—borne by my young friend with the most heroic fortitude—in which I was ably assisted by Mr. K. and Dr. E. Moore, senior surgeon to the Plymouth Eye Infirmary, I prepared the father for the worst of consequences—for the loss of the eye, or, at all events, for iritis of the most violent kind. My expression to him was—you must not allow inflammation to arise; you must bleed freely, and purge, and then give him small doses of calomel and opium every three hours; and you must strive and keep your son in bed, quietly, and in a dark room, until the cornea and iris are healed, and every symptom of pain, or tendency to inflammation, is removed.

Never were injunctions more implicitly followed. The anxious and skilful father allowed no inflammation to arise; he met every change promptly, and watched his son's progress, night and day, with the most paternal vigilance. After so gloomy a prospect, never did a case turn out more fortunately. No bad symptoms appeared, without an immediate remedy. Mr. K., jun., was blooded four times from his arm, had 36 leeches applied, and took only about eleven or twelve grains of calomel, before complete salivation ensued. Excepting a slight drag of the pupil downwards, making it somewhat perpendicular, like a cat's eye, by an adhesion to the cornea—and excepting also a black spot at the junction of the iris and cornea, on the temporal and maxillary side, shewing the dark urea underneath the spot from whence a portion of the iris was removed—no difference can be perceived between his left and right eye; and, indeed, a common observer could not find out any alteration. The circular and radiated fibres of the iris have preserved nearly all their original powers of contraction and dilatation; but in a very strong light, the under fibres cannot close quite to the same extent as formerly, and then some inconvenience may be experienced. The sight of the eye is quite as perfect as it was prior to the accident. It is most worthy of remark, that both the wounds made in the cornea, the first through its centre by the copper, and the second by myself, healed without the slightest speck or opacity, or interruption to vision; and it is equally remarkable, that the capsule of the lens was neither cut, nor bursted, nor injured by the copper undulating and repassing over the parts. For so grave and serious an accident, the result was singularly fortunate. Mr. K., jun., has since studied in London, and settled as a general practitioner in Cornwall, where he succeeds well in his profession.

On the 13th of December, 1833, both Mr. K. and his son called on me at my request, and brought the piece of copper, when I was enabled to make the following annexed sketch of it, and also of the eye.

Fig. 1.

Piece of copper magnified two diameters.

Fig. 2.

The eye. *a*, Pupil, elongated downwards. *b*, Black spot whence the copper was removed.

ON THE USE OF THE

NITRATE OF SILVER IN SOME INFLAMMATORY AFFECTIONS

OF THE

MUCOUS MEMBRANES OF THE MOUTH AND FAUCES.

By R. T. Hunt,

Lecturer on Diseases of the Eye at the Pine-street School of Medicine and Surgery, Assistant Surgeon to the Eye Institution, &c. Manchester.

At a time when the exhibition of mercury is recommended in so many complaints, the following account of the treatment of some of the evil consequences which supervene upon the affection of the system, produced by this powerful agent, will not, I trust, be wholly unacceptable. Nor are the bad effects to which I allude dependent merely upon the inordinate use of this remedy; small doses, in some instances, having caused ptyalism, when no such influence on the system was intended by the prescriber. Having frequently observed the great length of time which generally elapsed before ulcerations of the mucous membrane of the mouth, occurring during ptyalism, would yield to the common astringent, or stimulant applications, although assisted by that constitutional treatment which the circumstances of the case appeared to indicate; and having also had numerous opportunities of estimating the comparative advantages of different stimulants, when applied to the mucous surface of the conjunctiva, owing to my connexion with the Eye Institution; I was induced, by the analogy of structure existing between these membranes, to conclude, that the nitrate of silver, which has proved, after repeated trials, the best stimulant in certain affections of the conjunctiva, might be resorted to with advantage in similar diseases of the mucous membrane of the *mouth*.

In the first case in which this plan was adopted, the mouth had been only three days affected; there was great tumefaction of the mucous surface of the lips, gums, and inside of the cheeks, which were also suffering from several small sloughy ulcerations; and several quarts of fluid had drained from the mouth during the day. The ulcers were freely touched with the solid nitrate. Next day the swelling had entirely subsided, the sloughs separated, and the salivary secretion was very much diminished. A single repetition, after an interval of two days, was sufficient to restore the affected parts to a healthy state. The constitutional treatment consisted of saline purgatives and diluent beverage. Since that period, I have applied the same remedy, with an equally successful result, in a considerable number of cases, in all of which ulceration had commenced. This effect has indeed occurred so uniformly, as to justify me in recommending the treatment with confidence. The following was one of the most severe affections of this description:—

W. A., a painter, æt. 26, was seized, September 1st, 1832, with all the symptoms of colica pictonum, which yielded, in the course of three days, to the employment of general bleeding, purgatives, and the external application of spt. terebinth. to the abdomen. During this time he took twenty-six grains of calomel, in combination with purgatives, which acted powerfully on the bowels.

3d.—In the evening, his mouth having become slightly affected, he was ordered saline purgatives, and a solution of the nitrate as a lotion.

4th.—As the lotion had discoloured the teeth, the solutio alum. cum tr. capsici was substituted.

5th.—Several small sloughy patches appeared on the inside of both lips, which, together with the gums and cheeks, were much swollen, and the salivary secretion very copious. The nitrate was freely applied to the ulcerated parts of the lips.

6th.—Lips much better; mucous membrane of both cheeks sloughy;

tongue very much enlarged, and covered with sloughy ulceration, preventing, by its size, any ocular examination of the fauces. But reasoning from the difficulty of swallowing, and the pain caused by pressure on the larynx, would lead to the conclusion, that the mucous membranes of the fauces, and upper parts of the pharynx, were in a similar condition. There is now an immense draining of salivary fluid, and such a degree of suffering, that he cannot be prevailed on to take any thing except water and his medicine. Nitrate, applied to the lower surface of the tongue, and inner surface of the cheeks, for the first time, and repeated to the worst lip.

7th.—The nitrate having been too freely applied, and having, consequently, caused considerable pain for some hours afterwards, was not repeated to-day, but he was ordered to use a warm opiate lotion.

8th.—Much better, except the under surface of the tongue, which had not become inflamed until the 6th; swelling and salivary secretion much diminished. Nitrate applied sparingly to the tongue. Opiate lotion continued.

9th.—Improving; no farther occasion for the nitrate.

12th.—To-day I met him walking out. Mouth quite well; salivary secretion natural.

It may be proper to add, that saline purgatives were given daily; and that in both instances the patient was desired not to swallow the saliva after the caustic had been used.

Since the occurrence of these cases, I have followed the same plan of treatment in inflammation of the fauces, accompanied by enlargement of the tonsils; and although in many instances the disease has been of that acute character in which local depletion is invariably adopted, and which frequently terminates in suppuration,—and although the nitrate was applied in the commencement, unassisted by any other local remedy,—the disease was brought to a speedy termination without any formation of pus taking place. I have also tried the caustic in four cases of scarlatina anginosa, in one of which, occurring in a boy, æt. eight years, the tonsils were so much enlarged, that by a single introduction of the pencil, the caustic was applied to both tonsils; and after one repetition, the swelling subsided. In the others, a single application was sufficient to produce a favourable result.

I have hitherto principally alluded to the local advantage to be gained by the employment of this remedy, viz. the removal of the inflammatory affection of the mucous membranes connected with the mouth and fauces. But I consider the speedy termination of increased salivary secretion thus produced, a circumstance of equal, or even still greater importance. Instances occasionally occur in which ptyalism continues, in spite of all treatment, whether local or constitutional, for such a length of time, as to reduce the sufferer to a deplorable state of debility, from which he never entirely recovers, although existence may be prolonged for a few years. And in such cases, there is frequently no ulceration, nor even any active inflammation present; or, if in the first instance these circumstances have existed, they are now no longer to be found, the tongue and inner surface of the mouth being only slightly tumid, and the gums spongy. But the salivary glands seem incapable of returning to their natural action; and although the stimulus which caused the inordinate secretion may have been long withdrawn, the habit has been too firmly fixed to be easily eradicated. The draining of saliva continues for months, or even years, producing the lamentable consequences already noticed. The records of pathology also supply us with similar instances, although differently produced. I refer to idiopathic ptyalism—an affection no less obstinate in its course, nor less serious in its effects, than salivation produced by the exhibition of mercury. I have not met with any case of such long-continued affections since I have adopted the method of treatment by nitrate of silver (a period of nearly three years); but a deliberate view of the evidence of its beneficial influence, afforded by those instances in which it has been employed, would, I think, justify a rather sanguine anticipation of its effects in these cases also, in which I should therefore recommend it to be cautiously used.

The manner of employing the nitrate may be collected from the preceding report, with the addition of the following limitations. Should the patient complain of very severe pain, continuing for some

hours after the application, this will have arisen from its either having been too freely, or not sufficiently accurately applied. Such being the case, and the disease still continuing, the remedy must not be again resorted to for two or three days. When the ulceration, tumefaction, and salivary secretion, have been considerably lessened by the first application, a repetition may not be necessary; or it will at least be desirable to wait a few days, in which time the affection will frequently have so far subsided as to render the further employment of the nitrate not only useless but decidedly injurious. I have more than once observed the ill effects of persevering too long in this treatment; and I can safely state, that not even the most severe affections will require more than eight or ten applications—seldom so many. The pain is trifling, unless when the application is so freely used as not only to affect the diseased but also the surrounding healthy structures; and there is this variation—that when the tongue, gums, inner surface of the lips, and of the cheeks, are affected, the pain caused by the nitrate is much greater than that produced by its application to the uvula, tonsil, or fauces. In these latter instances the sensation scarcely deserves the name of pain.

These observations are intended to refer to the diseased structures only; for if applied in the same manner to similar parts in a healthy condition, the pain is frequently very acute, the nitrate then acting as an excitant of inflammation, which identical application, in the former instance, produced (however paradoxical it may appear), the subsidence of that inflammation which already existed.

I am fully aware that the nitrate in solution has been frequently recommended in similar affections; but it will be found upon trial to cause as much suffering as when applied in substance; and requiring to be much more frequently repeated, before the desired effect is obtained, constitutes an important objection to this mode of its employment.

OBSERVATIONS

ON THE

VENEREAL DISEASE;

Being an Extract from the Annual Report of Diseases treated in the Hospital of the 72d Regiment, at the Cape of Good Hope, in 1832.

By Thomas Clarke, Esq.

[Communicated by Sir James M'Grigor, Bart., with the Author's permission.]

[Continued from p. 864.]

In the constitutional disease the treatment is as follows, modified according to the degree of intensity of the symptoms:—Venesection, purgatives, antimonials, tepid bath, guaiacum, sarsaparilla; and when mercury is used, it is only in the stage of convalescence, and then in the form of the compound calomel pill. In the ulcerated fauces or tonsils, detergent gargles are employed, or, what I find to be more efficacious generally, the application of the lunar caustic in substance.

In the first case the primary disease was an ulcer on the internal surface of the prepuce, circular and superficial, with slight induration of the edges, and healed without mercury in sixteen days. Two years and a half after, he had another ulcer on the prepuce, of nearly the same character, and which healed without mercury in six days; and fourteen months subsequently to the latter, a papular eruption appeared on the skin, which was removed by the use of purgatives, antimonials, and the tepid bath, in six days. This man is of a vigorous constitution and moderate habits.

The second case had contracted the primary disease four times during the two preceding years, all ulcers on the internal surface of the prepuce, the last of them excavated, with elevated edges, and much indurated. They were healed without mercury; and ten months subsequently he appeared with an extensive pustular eruption from head to foot, and a deep sloughing ulcer in the tonsil. The disease was completely removed by the treatment already specified, without mercury; but the period, including convalescence, was protracted to one hundred and five days. This man is as yet of a healthy constitution, though much addicted to habits of intemperance.

Nine months have elapsed, and the disease has not re-appeared.

The third case appeared at the hospital with an extensive tubercular eruption on the face, chest, and shoulders, with broad livid blotches on the lower extremities. He had been on detachment, where he had contracted an ulcer on the prepuce, which he had cured by his own means, but, as he stated, without the use of mercury. Within a fortnight from the healing of the sore, the eruption broke out. The disease was removed without the use of mercury, in fifty days, leaving a deep discolouration of the skin. Nine months have elapsed, and the disease has not returned; the health is uniformly good, though the skin has not yet recovered its natural colour. Three years and a half previously, he had a primary ulcer, the character of which I had no means of ascertaining, but for the cure of which mercury had been used in a moderate degree, according to his account.

The fourth case was that of a deep sloughing ulcer of the glans, with elevated edges, and great induration. As it shewed no disposition to heal under the non-mercurial treatment, which was persevered in for a period of eighteen days, mercury was employed: he was cured under its use, and dismissed from hospital in thirty-seven days.

Twenty-four days afterwards he returned, with the lower extremities covered with large copper-coloured blotches. He was put upon a course of antimonials and sarsaparilla, and the disease was apparently removed in forty-four days, though the discolouration of the skin remained.

After a lapse of seven weeks he returned again, with a tubercular eruption on the head and face and upper part of the body; the site of the ulcer hard and inflamed; and there was also a considerable degree of constitutional irritation. Antiphlogistic remedies were employed, and a course of antimonials and sarsaparilla recommenced. This treatment was persevered in for the period of eight weeks, when it was presumed that the disease was completely eradicated. However, in the course of three months and a half he returned once more, complaining of pain in his elbows and knees, sore throat and deafness, with a troublesome cough. There was also an extensive white aphthous ulcer on the back of the pharynx; and the whole of the fauces were in a state of inflammation. He is still under treatment; but no mercury has been used subsequently to the cure of the primary disease.

This man's habits were those of extreme intemperance, being slavishly addicted to tobacco as well as spirits; and he attributes the last attack to exposure to cold in the guard-house, when in a state of intoxication. His constitution is now much impaired.

The next case was one of a small superficial ulcer on the external surface of the prepuce, which was healed without mercury in eleven days. A few days afterwards he returned to hospital with gonorrhœa, without, as he stated, having been exposed to a fresh infection. After a lapse of four months he came to hospital, complaining of headache, and shivering, as if he had caught cold; and on examination a papular eruption was discovered all over the body. On the febrile symptoms being reduced, the eruption disappeared. No mercury was used.

The next case was one of bubo, which had not been preceded (if his assertion is to be relied on) by either a primary ulcer or gonorrhœa, although he admitted that he had been exposed to the chance of incurring infection. It suppurated, and healed without the use of mercury; and in four months afterwards he returned to hospital with pains in his joints, and an ulcer in his throat. This disease was also removed without the use of mercury, and seven months have elapsed without any return of it.

The remaining cases, five in number, were primary ulcers, all very nearly of the same character, situated on the internal surface of the prepuce, with more or less induration; and the constitutional disease was a papular eruption, with slight febrile excitement. Both primary and secondary symptoms were removed without the use of mercury; and the period under treatment for the latter averaged five-and-twenty days.

If these cases will warrant any conclusion, it is to my mind in favour of the non-mercurial treatment.

As to "whether all the variety of sores originate from the same virus," I would answer, that I think the same venereal virus is capable of producing sores of various characters; but whether this specific cause is at all times in the same state of virulence, may be a question. I think that it is not; and

that it may be varied in its character, and in its influence and effect, by the stage of the disease, and also by the particular state of the general system of the person affected.

It is further my opinion, that the character of the sore produced by the application of this virus, does not by any means depend solely upon any specific difference in its nature, or any particular degree of its concentration; but that, in passing into another system, it becomes subject to a new and a different influence, and consequently that the sore to which it there gives rise may exhibit any character which that other system may at the time have the power of conferring upon it. Something of this kind must take place, otherwise it would be difficult to account for the fact of several men contracting disease from the same source within a few days (I may even say a few hours) of one another, and exhibiting sores of totally different characters. We have every day opportunities of verifying this fact.

In regard to the question—"whether the virus of chancre and gonorrhœa be identical or otherwise," I find more difficulty in giving an answer. The appearance of ulcer and gonorrhœa together, in the same person, is no rare occurrence, and I have ascertained it satisfactorily that they have been contracted from the same source and at the same time; and we have evidence every day to prove that such may also take place in different individuals, one contracting a sore and another a running, from the same person. If, then, we assert the co-existence of two distinct poisons, we must suppose that some persons are susceptible of being affected by the one kind of poison and some by the other; which, in reasoning from analogy, we are perfectly authorized to do, for we know that some persons appear not to be susceptible of being affected by either, but may be exposed to the risk of infection with impunity. But what the laws are which regulate this infection, I do not at all understand. I have observed that one kind of affection prevails more generally at one time than another; but I have not observed that this has been the case at any particular season of the year more than another, nor that it has been influenced by any particular state of constitution prevalent at the time, or by any local circumstance that I have been able to discover. Although we can no longer avail ourselves of the argument for a diversity of poisons—that one requires the use of mercury for its cure, while the other does not, or that one is followed by secondary symptoms, while the other never is—yet, as it has not been satisfactorily proved that the matter of gonorrhœa can produce a chancre capable of propagating its own kind, nor *vice versâ*, and as gonorrhœa has been found to prevail extensively, and for a long period of time, without the appearance of any other venereal affection, we have some grounds for believing that they are not identical, but distinct venereal poisons. But I confess it is a subject of difficulty. With regard to the origin of venereal virus, I have no hesitation in saying that I am of opinion that the virus of gonorrhœa is capable of, and frequently does arise spontaneously; but I doubt very much whether this is ever the case with the virus of chancre.

From my own experience in the treatment of this disease, the question is at rest in my mind as to the necessity of the employment of mercury, being convinced that there is no form of the disease, primary or secondary, that may not be cured without its use.

With all the attention I have been able to bestow on the characters and appearances of the primary affections, which I have had opportunities of observing, I have not found that I could predict, with any thing like an approximation to certainty, whether any one more than another would be followed by secondary symptoms, or of what character these symptoms would be; neither could I say, from the appearance of the secondary symptoms, what the character of the primary affection had been. Certainly the small superficial ulcer without induration, and which heals generally within a period of fifteen days, is less frequently followed by constitutional symptoms than any other; yet it is followed sufficiently often, and by a sufficient variety of appearances, to prove that it is not an exception.

I have never seen but two cases, on which I could rely, of secondary symptoms consequent upon gonorrhœa alone, without some other primary affection having at some time or other existed. These were mild papular eruptions, and very easily removed. As it is not yet ascertained what the utmost limit of

time may be which may elapse before the secondary symptoms make their appearance, I should hesitate to ascribe the appearance of these symptoms to gonorrhœa, if I found that any other primary affections had existed within the period of one, or even two years; for instances have occurred to me of the period being extended to the latter, if reliance could be placed on the veracity of the persons.

I have no doubt it will be found, that the average period of time which may elapse in this climate will very far exceed that which ever elapses in Europe. This may perhaps be attributed partly to the influence of climate, and in part to the constitutions and habits of the persons.

It remains only to take notice of a case of this disease, which, occurring in a strumous habit, exhibited a train of cachectic symptoms of great severity, which ultimately proved fatal.

This man was sent on a monthly detachment to an outpost; and a few days after leaving head-quarters an ulcer appeared on the prepuce, which continued to enlarge, and about a fortnight after the appearance of the ulcer, an eruption broke out on his skin; and in this state he presented himself at the hospital on being relieved from detachment, having in the meantime used no medicine whatever.

The ulcer was situated on the prepuce, about the size of a shilling, with deep, irregular surface, discharging a dark-coloured ichor, and very painful; and the constitutional symptoms were a very general eruption of copper-coloured tubercles and blotches, most numerous on the face and lower extremities; a quick pulse, with dry, hot skin, and altogether a great deal of constitutional irritation.

Under the antiphlogistic regimen, and the use of fomentations, poultices, and other local applications, with the free use of opium internally, the severity of the symptoms was mitigated, but the progress of the cure was very slow. At the expiration of six weeks, however, the ulcer was healed, and the tubercles had desquamated, leaving the skin sound but discoloured.

Hitherto no mercury had been used; but it was considered that a small quantity, in conjunction with the other remedies, might now be serviceable in exciting a new action in the constitution, and restoring the general health. Accordingly, five grains of the compound calomel pill were given every other night for three weeks, the antimonials and sarsaparilla being continued.

Every symptom of the disease being removed, and the general health good, he was discharged from hospital. Exactly a fortnight afterwards he returned, complaining of pain in both ears, dizziness in the head, with great deafness, loss of appetite, constipated bowels, and an extensive erythematous inflammation in the fauces. The occurrence of these symptoms he attributed to cold.

Blisters behind the ears, and on the nape of the neck, with issues and detergent gargles, improved the sense of hearing a little; but the sensation of noise and confusion of the head continued; and in the meantime symptoms of pulmonic disease began to manifest themselves, and in a short time assumed the character of phthisis.

The intellectual faculties were now implicated, and he continued in a state of fatuity until dissolution.

The following were the appearances on dissection:—

Cranium.—The sinuses and venous system of the brain generally, were loaded with blood; and serous effusion had taken place to some amount beneath the arachnoid membrane. The substance of the brain, when sliced, exhibited numerous bloody puncta. On opening the left lateral ventricle, very extensive disease presented itself, the whole of the corpus striatum, and the substance of the brain outwards to the dura mater, being converted into a soft, pulpy, dark-coloured mass, much resembling fungus hæmatodes. The structure of the cerebrum and cerebellum in other parts was firm and healthy, and but little fluid existed in the ventricles.

Thorax.—Much serous fluid was found in the pericardium; the heart itself did not appear to be diseased. The left cavity of the chest contained about a quart of serum, having a quantity of gelatinous matter floating in it; the lung being compressed and hepatized. This organ, when cut into at its lower part, exhibited numerous crude tubercles, but in the apex several large vomicæ had formed. The right lung also contained tubercles, but in a much less advanced stage than those found in the left side.

Abdomen.—The liver was enlarged

and granular; and the gall-bladder one-third filled with attenuated bile. The membranous viscera were sound, but the mesenteric glands were extremely diseased; their substance being tubercular, softened in the centre, and containing green-coloured puriform matter.

THOMAS CLARKE,
Surgeon, 72d Regt.

CASE OF DOUBLE UTERUS,

WITH OTHER ANATOMICAL PECULIARITIES.

To the Editor of the Medical Gazette.

SIR,

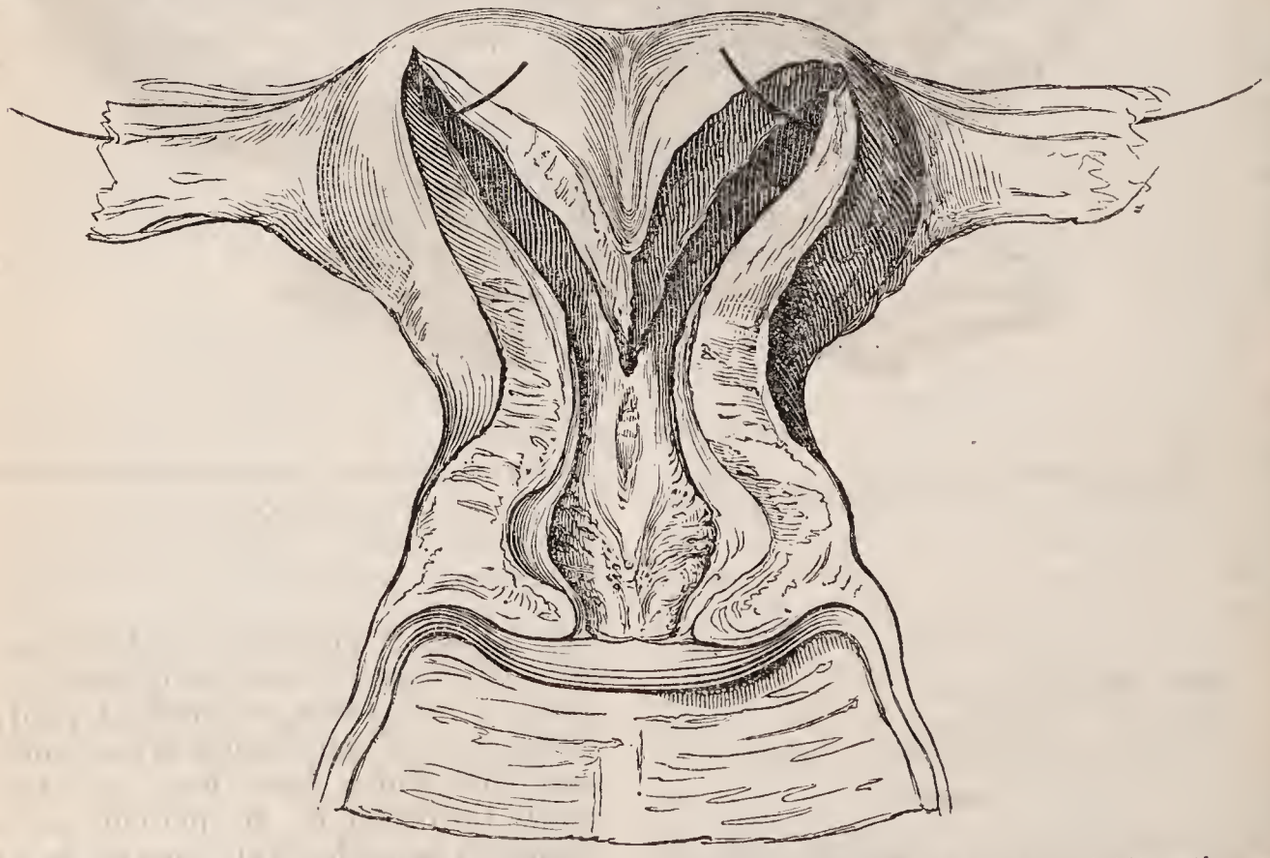
PERHAPS the following case, of a uterus presenting some anatomical peculiarities, may be worth inserting in your valuable journal.—I am, sir,

Your obedient servant,
D. ADAMS,
Student.

Guy's Hospital, March 4, 1834.

A woman, æt. 38, was brought for dissection (under the regulations of the Anatomical Bill), Feb. 11, 1834. The external genitals were in their normal state; and the hymen was remarkably perfect, having an annular opening scarcely sufficient to admit the end of the little finger. The uterus, on its exterior, was divided by an anterior and posterior vertical depression, into symmetrical portions. On making the sections, as represented in the accompanying sketch, the two superior thirds of the cavity were divided by a septum into nearly equal canals, extending outwards and upwards to each cornu, where the fallopian tube terminated as usual, pervious. The neck of the uterus, which occupied about the lower third, presented nothing remarkable, having an opening common to the two canals. The ovaries were unusually large; and in one there was a cyst, containing more than a drachm of jelly-like fluid.

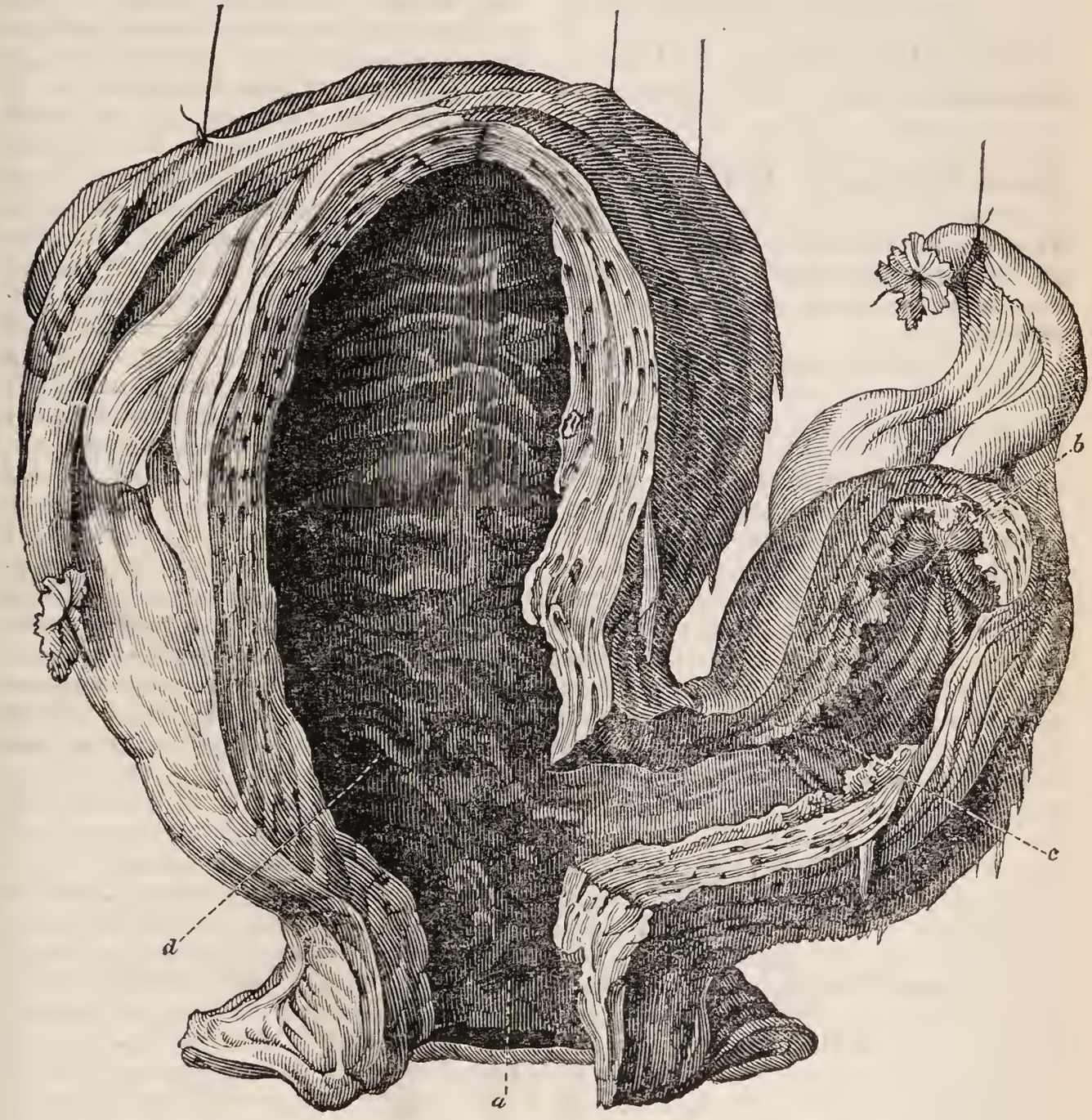
In the same subject were observed two or three other anatomical appearances worthy of being noticed. The whole of the right kidney had been entirely absorbed, leaving only the membranous capsule, enlarged to at least five times its natural size, and containing nearly a pint and a half of coagulable serous fluid, pushing the duodenum and ascending colon forwards. The ureter attached to the inner and lower part of this capsule was completely obstructed by two strictures, between which it contained some fluid, like that in the sac. The left kidney was much enlarged, and its pelvis had begun to assume the cystic form observed on the other side, being sufficiently large to hold one or two ounces of urine. The ureter on this side was somewhat contracted, but did not impede the flow of urine through it. The bladder was large, but healthy.



Length, from os uteri to superior part of the fundus, 3¼ inches. Breadth at its widest part, 3 inches. Length of septum dividing the cavity, 1¾ inches.

DR. LEE'S CASE OF DOUBLE UTERUS.

To the preceding interesting case we append a copy of the engraving which accompanies the history of a double uterus, published in the Medico-Chirurgical Transactions, by Dr. Lee. In the latter instance, the woman died eight days after delivery; and the cornu which had been impregnated contrasted strongly with the other. We gave an account of the paper in November 1832, and now repeat our impression of the engraving, for the benefit of the numerous subscribers who have, since that time, been added to our list.



Explanation of the Woodcut.

a, The cervix uteri.
d, The right cornu, which contained the fœtus.
c, The left cornu, lined with deciduous membrane.
b, The orifice of the Fallopian tube open.

AN ESSAY

ON MEDICAL REFORM.

By Dr. Barlow, of Bath.

A PARLIAMENTARY inquiry into the state of the medical profession being at length happily obtained, the time is arrived when the various speculations, respecting our system of medical polity, which have so long agitated the profession, and which have been so abundantly furnished by the periodic press, require to be collectively viewed, in order to arrive at just conclusions, and to

approach some digest of those practical measures of reform which the legislature may safely and beneficially effect. Such a review, however, requires that the principles by which such plans of reform are to be tried should be well understood; else, in attempting reformation, we may only plunge more deeply into error. At such a moment it behoves all who have reflected on the subject, and who have the welfare of the profession at heart, to submit freely whatever views of it they may deem of consequence, or which can furnish any aid or guidance to the Committee of the House of Commons, in the important investigation in which they are engaged. With this view, and with these feelings, are the following remarks, in exposition of a complex question, submitted for consideration.

On a subject so complicated and extensive, on which so much ignorance prevails, and where so many conflicting interests and prejudices are to be reconciled, it is not wonderful that great diversity of opinion has been displayed; and if propositions incongruous and absurd have been urged by the respective parties, with a confidence for which the wisdom evinced affords but very slight ground, such efforts for the attainment of a great public benefit should be regarded not only with indulgence, but, so far as the efforts are concerned, with approval. The good intentions of the parties we have no right to impugn; and their errors of judgment are harmless, because the whole subject must undergo the scrutiny of a tribunal, which will bring to its consideration those principles of sound political science, which the profession itself, in its zeal for reformation, and divided as it is into separate and conflicting interests, would be too apt to overlook.

It may seem strange to make the assertion, but my persuasion is, that the profession itself, as now constituted, is no competent judge of what its political organization ought to be; and that the constitution most suitable and beneficial for it, would be far better adjusted by minds less under the bias of personal feeling, and more imbued with political science, than by any body of the profession. In this I mean not to speak slightingly of the general intelligence or information of my professional brethren, who, I am well convinced, possess, as a body, as much general knowledge, enlightened sagacity, and liberal sentiment, as any other that exists. But it would be difficult to ascertain how the collective body, as represented by the higher intellect and superior cultivation, really judges on the subject; for no means exist by which such a decision could be accurately or distinctly obtained. Circumstanced as the profession has long been, and still is, it affords no facilities for collective deliberation, or for that patient and mature investigation which would lead to conclusions in which all the inquiring parties could concur, each surrendering to the force of reason and of truth those "idols of the mind" by which even the strongest intellects are more or less swayed. We find it consisting of several branches, some originating in legislative enactments of old date, others superadded by the slow but sure operation of public opinion, and public necessities. Each of these has hitherto pursued its own course, regardful only of its own aggrandizement, and reckless of the injuries which its special advancement might inflict on the other departments; while no provision existed for consolidating the whole into a consistent and efficient system of medical polity, or for establishing a general medical council, formed by deputations from the separate incorporations, in which each of these might uphold its special interests, and the whole co-operate harmoniously in all such arrangements as involve the collective interests of the profession, and the well-being of the community.

To the want of some such collective council may be ascribed much of the confusion which has crept into the profession, deranging its organization, and going far to confound all ranks and degrees; and much of the discordancy which so signally marks the reforming projects with which the periodic press has of late teemed. The evil, so far as it is one (for with it in its progress much good has also been conjoined), has sprung from each branch pursuing its own ends, as if no other were in existence, and without reference to the functions performed by the other departments. In this way have arisen errors both of omission and commission, such as could never have occurred if the profession, instead of being intrusted absolutely to separate and independent governments, had in its constitution possessed some means of bringing these

separate governments into collective deliberation, and combined operation, whenever subjects affecting the duties and interests of the whole required it.

The department of physic was under the guardianship of the London College of Physicians; but they limited their fostering care to a small portion only even of physicians, consigning the majority of these to a degraded class, disregarding wholly a large portion besides, and utterly overlooking that numerous class of practitioners from which the physician of the poor was to be supplied.

The College of Surgeons, too, limited their endeavours too much to the business of mere surgery, overlooking the glaring fact, that their licentiates were all obliged to practise physic, and most of them even to combine pharmacy. No provision being made by either College for supplying that most useful member of the profession, now designated the general practitioner, the public very properly, and most beneficially, exercised their all-powerful interposition, by erecting this class; and in despite of all legal enactments and corporate privileges, endowing it with their full confidence and firm support.

Such was the state of the profession when, in 1815, this latter class obtained from Parliament a distinct recognition and legal sanction, by means of the Apothecaries' Act of that year; and although the trust consigned by this Act to the Apothecaries' Company ought to have been undertaken by others, and should never have been suffered to devolve on them, yet to them is due the high praise of having fulfilled it ably and faithfully; and under the circumstances in which it was committed to them, their exercise of it well entitles them to be regarded as public benefactors. This subject must again be adverted to by and by, in more minute detail; I notice it here in order to illustrate the misgovernment of the profession, which has sprung from the want of some presiding general council, which, representing all the departments of the profession, could have guided the legislature aright in their well-meant endeavours to improve its condition.

Ere further legislation be attempted, it is now necessary to take such a comprehensive survey of all that relates to the profession, as shall exhibit clearly and unequivocally, not only the essential requisites of the medical character, with the gradations which the public accommodation requires, but such adaptation of the profession to the existing state of things, as shall effect a thorough correction of all actual errors and abuses, without risking by revolutionary changes that good which even the present system embraces, which reason sanctions, and the value of which the slow but sure experience of ages has confirmed.

With this view I shall now use my humble endeavours to lay before my professional brothers the judgment which long and patient consideration of the subject has led me to form; and, for the sake of perspicuity, shall arrange the subject under the following heads, viz.:

I. The essential requisites of the medical character.

II. The arrangement of the profession, which, founded on these essential requisites, would abstractedly be suited for imparting its full benefits to the community in all its gradations; and

III. The adaptation of this arrangement to the state of things actually existent, so as to obtain the greatest amount of good, without unnecessary violation of those established habits and usages, which, while they contribute to sustain the best interests of the science and profession, are so interwoven with the whole of our social system, that to annihilate them would be impossible, even if it were politic to attempt it. This last head will necessarily comprise the investigation, 1st, of how the state of the profession actually existent has arisen; 2d, of the errors and defects which cause its present inefficiency; and, 3d, of the mode in which legislative authority may now interpose, both effectually and safely, to give to the profession a legal organization, suited to the advanced state of medical science, and calculated to promote the well-being and harmony of the profession, and the best interests of the community.

1. *Essential Requisites in the Medical Character.*

This head may be briefly discussed. The unity of medical science is so obvious that few will formally or deliberately deny it. It is incontestible that the practitioner of physic should be acquainted with the principles of surgery, knowledge of them being indispensible in the exercise

of his own art; and surgeons should understand physic, not only because their own branch absolutely requires it, but because the larger portion, by far, of the practice of all surgeons, is medical. To the truth so stated, none will object. But it is not to the simple truth that any objection has been taken, but to the misapplication of it in support of revolutionary projects, and of wild schemes for annihilating all distinctions. It does not follow that because the science of physic is one and indivisible, that only one species of practitioner should exist, and that all who practise any branch should be equally qualified and similarly characterized. Neither does it follow that all who so practise should derive their qualification and authority from one source only. If simplification to this extent be the end and aim of the "one faculty scheme," so much discussed of late, I can hardly conceive a design more impracticable, or which, if it were possible to carry it into effect, would be more pernicious. So long as there are gradations in society, must there be distinctions of qualification and rank in the medical profession; and greatly has medical science profited by such distinctions having existed. All practitioners cannot be equally remunerated; the poor cannot pay as liberally as the rich; each class requires an appropriate medical attendant; and to insist on equal elementary qualification from all would be the height of injustice. For the sake of medical science, the standard of professional qualification for those who aspire to the higher distinctions, ought to be a high one; but it would be most unjust to apply it to those practitioners who exercise their functions in a humble sphere, and whose labours must be extensively devoted to those who can pay for little beyond the drugs they consume.

How, then, is this ideal equality to be realized? No one can be so insane as to meditate its accomplishment by reducing the higher standard to the level of the lower. To imagine even a middle point, to which both extremes should approach, would be absurd; for to enforce such a scheme would be still to act most unjustly towards the humbler practitioner, while it would inflict signal injury both on the science and profession, by wantonly lowering the high tone which the literature, science, and varied accomplishments, of the higher classes of practitioners have imparted to the profession. A distinction of ranks, then, is both suitable to our social condition and beneficial to science, while it eminently upholds that respectability in which all classes of the profession participate. In what estimation would the profession now be held if distinctions of rank had not prevailed, and if these very distinctions had not attracted to it the many eminent men whose learning and talents have shed such a lustre over it? Had equality of qualification been legally enforced, such as seems now to be contemplated—had there been no physicians or surgeons, but only general practitioners, issuing indiscriminately from one faculty—can it be for a moment conceived that the profession would ever have attained the social rank it now holds, or have merited the eulogium which has been passed on it by the highest authorities and most competent judges? Dr. Parr's estimate of physicians is on record, and it is a proud distinction to have merited such testimony as he has borne to their intellectual superiority. His words are, "I have long been in the habit of reading on medical subjects, and the great advantage I have derived from this circumstance is, that I have found opportunities for conversation and friendship with a class of men whom, after a long and attentive survey of literary characters, I hold to be the most enlightened professional persons in the whole circle of human arts and sciences." And again: "Of the three liberal professions, I must confess, that, in erudition, in science, in habits of deep and comprehensive thinking, the pre-eminence must, in some degree, be assigned to the physicians." Testimony equally high and explicit is borne in their favour by Blackstone; who, in recommending the study of the law as a branch of general knowledge, thus notices them:—"For the gentlemen of the faculty of physic, I must frankly own that I see no special reason why they in particular should apply themselves to the study of the law, unless in common with other gentlemen, and to complete the character of general and extensive knowledge; a character which their profession, beyond others, has remarkably deserved." It is needless to pursue this argument further. Distinctions of rank and qualification must exist; public exigencies call for them; the

advancement of science demands them; and they have been actually established for centuries so firmly that no reforming zeal, however headstrong and reckless, could now supersede them. In their existence there can be no injustice so long as it is not upheld by arbitrary statutes, or exclusive privileges. While all ranks are open to those who seek to enter them, it can be no injury to the lower that the ranks are not utterly confounded with each other, or that pre-eminence should belong to those who earn it at the cost of much time, labour, and expense; and who, in pursuit of it, sacrifice all expectation of early recompense. The unity of physic as a science, therefore, while it should ever be borne in mind in regulating medical education, would be a very unsafe principle for deciding on the degree of qualification which each species of practitioner should possess, or for determining the departments of the profession which the legislature should sanction. These must depend, not on abstract principles, but on the actual wants of the community; and in judging of these, it will be far safer and more rational to follow the sure guidance of facts and experience, than to adopt the speculative notions of any visionaries, however earnest or sincere these may be in advocating their favourite schemes. This brings me to the second head of my subject, which regards "the arrangement of the profession; which, founded on the essential requisites of the medical character, would abstractedly be best suited for imparting its full benefits to the community in all its gradations."

2. *Suitable Arrangement, founded on those Requisites.*

It follows, from the foregoing considerations, that abstractedly the political organization of the profession should be such as to supply to every rank of the community its appropriate species of medical attendant: for the rich, the man of learning and independence, who can afford so to educate himself as to reach the high standard by which his qualifications are tried, and afterwards to subsist himself until the knowledge which he so laboriously acquires comes to be duly appreciated; and for the poorer, the practitioner of humbler and cheaper attainments, who, while he possesses all necessary professional knowledge, so far as his sphere of practice requires it, cannot be expected to comprise the accessory branches of science and literature enjoined to the higher classes, but who, in his proper sphere, is both usefully and honourably employed. Let us now see how far legal provisions and the course of events lend their sanction to the justness of this view.

When a profession of physic was first recognized by law in these realms, some centuries ago, physicians alone constituted it. Here was "one faculty," yet it grievously failed to accomplish the ends of its institution. This was so far back as the commencement of the sixteenth century; and so long were the class of practitioners most needed by the public in struggling into acknowledged existence, that not until the eighteenth century were the surgeons separated from their colleagues, the barbers. Here, then, both the course of events and legal enactments, provided, not for consolidation of ranks in physic, but for their division, and great has been the advantage of the extension thus effected. But more remained to be done. Physicians were presumed to practise physic exclusively, and surgeons, however they might practise physic, had not the boldness to avow it. A want still existed, and was seriously felt. The surgeons supplied it, in a certain degree, by practising physic as extensively as they could; yet, restricted as they were by the popular notions, which long prevailed, notwithstanding the popular practice of employing surgeons as physicians was at variance with the notions, they did not suffice, and the apothecaries insensibly glided into both medical and surgical practice. A further want sprung up, and it proved that not only were surgeons obliged by the public necessities to practise physic, but many of them found it necessary to dispense medicines also.

This necessity of combining pharmacy with the practice of physic and surgery was long overlooked, or disregarded: the physicians utterly interdicted all such combination; the surgeons were compelled to admit, while they despised it. Still the general practitioner, or he who combines, in his own person, the several branches of physic, surgery, and pharmacy, was making silent but rapid way, in despite equally of long-founded prejudices and of collegiate ordinances, until, in 1815, this

branch had acquired so much importance, and assumed so prominent a station, as to obtain from the legislature a distinct recognition of their claims, and the willing grant of a special state of incorporation, with ample powers to improve, to the utmost, the qualification of their members. This statute, as creating a class of practitioners in physic, might have placed these under the guardianship of the College of Physicians; but this body stood too high in its own estimation to undertake the humble but most useful office. It might have been assigned to the College of Surgeons, but they too disdained it, from a lurking pride, which would not suffer them to acknowledge any connexion of their art with the despised branch of pharmacy. Not only did they thus forego the supply of general practitioners, which they might at that period have readily secured, but with a supineness most extraordinary and most culpable, they suffered to be wrested from them, without a murmur of remonstrance, the privilege previously enjoyed by their own licentiates, of combining pharmacy with their other functions,—it being distinctly enacted by the Apothecaries' statute of 1815, that from the passing of that act, no one should practise pharmacy unless he actually possessed the license of the Apothecaries' Company; which license could only be obtained through a few years' apprenticeship, and a course of education distinct from that enjoyed by the College of Surgeons, no reservation being made of the rights previously enjoyed by the surgeons. In consequence, since 1815, all young men intending to become general practitioners, (and it is the only line in which the great majority have a chance of earning a subsistence) have been compelled to undergo a double qualification, by becoming members both of the College of Surgeons and of the Apothecaries' Company,—an obligation at once unprofitable and vexatious. The diploma of the College of Surgeons is sought for, because public opinion still attaches value to it; the license of the Apothecaries' Company is obtained, because without it their surgical diploma would not entitle them to engage in that line of practice in which alone they can hope to find employment. But this state of things will not long endure. It will in time,—and that at no distant date,—be discovered, that the Apothecaries' license gives a full and sufficient legal authority to practise in every branch;—that it alone does so;—that the surgical diploma is in fact superfluous for practitioners of this class; and, in consequence, the Apothecaries' Company must, if the present organization of the profession were to continue, absorb, eventually, the whole general medical practice of the kingdom. I have dwelt the longer on the progress by which a class of general practitioners has been called into existence, because it illustrates forcibly the natural tendencies of the profession, and is directly opposed to the scheme of consolidation, which would have all practitioners emanate from one faculty, professed to be equal in qualification, and undistinguishable by rank or denomination.

The public necessities called into existence the class of general practitioners; the legislature has sanctioned them by its fiat; the Colleges, both of Physicians and Surgeons, spurned the despised office of superintending the qualifications and practice of this class; and this most important trust devolved on the apothecaries, who readily undertook it. And they were right in doing so; and faithfully, diligently, and judiciously, have they hitherto fulfilled it. If any impropriety attaches to its having been so confided, no portion of the blame rests with them; on the contrary, every praise is due to them for the zeal and ability with which they have laboured to render the class of practitioners qualified by them worthy of the legal sanction and protection which the statute confers.

It appears, then, that instead of one faculty,—of which alone the profession of physic consisted in the sixteenth century, there have sprung up in addition, by the uncontrollable influence of the public will, not only a numerous class of surgeons, practising physic extensively, but a further class, who practise physic, surgery, and pharmacy, now designated as general practitioners. In this progress, we see little to sanction the scheme of consolidation, of which so many speculatists seem now enamoured. By any sound intellect the conclusion deduced from such premises would be, not that consolidation of ranks was indicated, but precisely the reverse.

And thus we reach the third and last head of this inquiry—namely, the adaptation of the arrangement, abstractedly

most suitable, to the state of things actually existent, so as to obtain the greatest amount of good, without unnecessary violation of those habits and usages which, while they contribute to sustain the best interests of the science and profession, are so interwoven with the whole of our social condition, that to annihilate them would be impracticable, even if it were politic to attempt it.

[To be continued.]

CONNEXION BETWEEN MEDICINE AND PHARMACY.

To the Editor of the Medical Gazette.

Sir,

I am induced to lay before you some reflections which occurred to me on perusing your editorial article of the 18th ultimo.

In that article it is inferred, that, desirable as it may be, and indeed is, to sever the "unhallowed connexion between practice and pharmacy*," popular prejudice would only render such an attempt ruinous to the general practitioner.

Perhaps it may not be considered presumptuous, in one who has exercised both modes of practice, to offer his reasons for arriving at a different conclusion.

It is well known that the dispensing chemist sends out his medicines at a far lower rate than the apothecary; nor does the patient stop to reflect upon the fact, that the multiplied small profit of the former makes a better return than the apparently high charge of the latter, who dispenses only the prescriptions of his immediate friends: it is enough for him to know that a mixture, containing six draughts, which he procures for eighteen pence, is far more palatable than the old fashioned six draughts at nine shillings; nay, I may assert that the apothecary's charge for medicines, even where it includes attendance, is too often compared with the charge of the trading chemist, as though professional skill, acquired at much expense by years of study, and matured by years of observation, were unworthy of reward. I will refrain from inquiring how far, and in what manner, the physician himself has induced this state of things, believing, as I do most firmly, that the acquirements now demanded in the general practitioner must, of themselves, sooner or later, lead to a total change in the old mode of practice.

A moderate fee for attendance (varying with the rank of the patient, and possibly with the standing of the practitioner), is as easily charged at the year's end as eighteen pence for a draught; and surely, if it be not already claimable, it may be made so. The dispensing chemist, whose business would hereby be much enlarged, should charge *only* a trade profit on his preparations; and thus, while the expenses of illness would certainly not be increased, the sick man's stomach would be spared many a nauseous dose, which, under the old plan, must be made to appear on the Christmas bill.

Let me not, however, be misunderstood, as advocating the "one faculty," or any other system of universal equality: the practitioner who acts on the plan I have advocated and adopted, becomes neither more able, nor less responsible, than heretofore; and he will be as desirous as ever to seek, in all cases of danger or difficulty, a more experienced opinion than his own. That the public are not competent judges of medical skill is sufficiently proved in the success of Mr. St. John Long, and other empirics of the day. Let honourable distinctions, then, be made by competent tribunals, and let the rank of the general practitioner be commensurate with the liberality of his education and the extent of his skill. The physician, in title only, will then sink into insignificance, whilst the man of acknowledged talent will be sought out by his brethren; and, resting his character on medical opinion (the only honourable foundation for medical fame), he will attain an eminence which may be envied by all, but can be gained by the few only.

I am, sir,
Your constant reader, and already
obliged servant,
John Prichard.

Leamington, Feb. 18, 1834.

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* *Non noster hic sermo*—the *unhallowed* part of the phrase, at least, belongs exclusively to Dr. James Johnson.—Ed. Gaz.

SKETCHES OF THE PRESENT STATE AND FEELINGS

OF THE

MEDICAL PROFESSION IN THE PROVINCES,

And more especially in Liverpool;

WITH OBSERVATIONS,

By James Collins, M.D.

In a previous communication, I have endeavoured to delineate some of the shades and differences in the opinions and sentiments of our medical reformers here;—I have shewn how they are broken into little petty knots and cabals, each in its little sphere affecting to despise the others, and all endeavouring, amidst the general commotion, to advance their own individual interest, without much sympathy or sincerity for that of others:—in this I wish to convey some notions of the actual state of the practice of medicine among us. Few but those who witness it can comprehend its low and prostrate position, and the causes that have contributed to it. But I must first direct attention to one or two features in the Liverpool petition, that seem to me peculiarly deserving of consideration and support. Some little time ago, a general meeting of the profession was convened here, and a petition to the House of Commons was adopted, merely praying for the appointment of a committee to inquire into the state of the medical and surgical profession. As Mr. Warburton's motion to that effect has been conceded, it is probable that the Liverpool petition may not be presented; at least, if it should be, it will seem somewhat strange to pray for the appointment of what is already appointed. However, be that as it may, there are some points in it of peculiar interest. In it they have pointed out some of the anomalies of the existing laws, but have carefully abstained from pressing on the attention of the legislature any particular panacea or nostrum of their own; such as the fusion of all ranks and denominations of medical men into one, or the unmeaning and indefinite jargon of "one faculty—all doctors, and no surgeons:" they have only sought for an assimilation of the medical laws and education in Great Britain and Ireland, leaving it to the good sense of parliament what that change ought to be, and by what means effected or enforced. For as things are managed now, the rights, privileges, and education of medical men, seem to depend as much on latitude and longitude, as on any fixed or equitable principle: those of Scotland differing from those of England and Ireland, and all from one another; the right of prescribing in Dublin by no means implying it in London or Edinburgh, or *vice versâ*.

One clause they have inserted, particularly deserving the countenance and sanction of the profession, namely, that physicians should have a legal right to remuneration for attendance. The want of such a law is particularly felt in this part of the country, and is the source of great and frequent injustice, enabling people of wealth and rank, but without principle or shame, to take our advice and services without paying for them. The barrister is paid before he gives his advice; the physician is compelled, by etiquette and usage, to give his first, and then to trust to the honour of the patients, or their friends, for the pay. There is no parallel between them in this respect: and none but persons acquainted with this part of the country could or would believe the advantage taken every day of this want of legal redress by the patients themselves, or their executors, and by the assignees of bankrupt estates. So sensible of this are the medical men here of every denomination, that there was not one dissentient voice at the meeting on its justice and policy; and as it is one of great importance—to us, at least, in this quarter—I trust I may be allowed, in the Medical Gazette, to direct attention to it from other and more influential sources. "The days of chivalry are gone:" people will not pay if they can avoid it; and they have always been governed more by law than sentiment or morals. Why, then, should the physician be made to depend more on the caprice or contingency of the latter, without the protection of the former? Yet so it is.

Here, as every where else, we swarm with medical men. The great and increasing commerce of the town, the mixed and various ingredients of its population, consisting of Turks, Jews, and Gentiles, from all parts, attract them at all seasons, and from all quarters. We stand, as it were, in the high

road to all parts. There are few at home or abroad who have not some friend or connexion, or facility of introduction here; and hence, as might be anticipated, there is a greater mixture and variety of medical men here, of foreign and domestic growth, than is, perhaps, to be found any where else. Like the inhabitants, they are of all sorts, and of all places. Hence the competition for practice is great, and the ways and means to attain it often as ingenious as disreputable. In a population of about two hundred thousand, comprising that of the town and its immediate vicinity, there are from two to three hundred medical men, of one sort or another, competitors for practice. They are all usually denominated "doctors," the public paying very little regard, in this respect, to college or university distinctions. The chemists and druggists are even beginning to assume and receive this appellation. About nineteen-twentieths are general practitioners, surgeons, or apothecaries, and many of them neither one nor the other,—the law allowing any man to stick surgeon or doctor, or accoucheur, or dentist, upon his door, and to practise all or any as he pleases. It is only when the patient is killed, maimed, or in some degree injured through his ignorance or bad practice, that a prosecution may be commenced, or that the law takes cognizance of him; and then there are so many loop-holes of escape, that it is often impossible to catch or punish him for doing so.

This anomaly and defect in our medical legislation is the cause of great injury to the regularly-educated members of the profession. So many of these illegitimate sons of Esculapius have succeeded to practice and wealth here, that they live in the best streets, keep the most expensive establishments, and turn out in such style and equipage that the first physicians and surgeons of the town are on terms of friendship and intimacy with them: they are daily in the habit of meeting them in consultation, and glad, indeed, to have the opportunity of doing so. Here, men that would be scouted elsewhere, who have neither degrees nor right to practise, are met, cherished, and upheld by what are termed the *tops* of the profession. Thus all land-marks between legitimate and illegitimate practitioners are destroyed. There is no such thing ever known here as refusing to meet a man who has no degree or license to practise, unless the parties are on bad terms, or have a personal dislike to each other. One could scarcely believe the extent to which this degrading practice is carried. It is so common, that no one ever questions or feels its impropriety. It removes all distinctions between the educated and uneducated, and thereby narrows the sphere and chances of practice of those who have been regularly introduced into the profession.

Another very peculiar custom prevails here: physicians, surgeons, and apothecaries, all send in their bills. There is scarcely any such thing as paying either during or at the close of his attendance; it matters not, in this respect, whether he comes in as consulting physician or surgeon, or as the ordinary attendant of the family; he is obliged, like the regular tradesman, to send in his bill at Christmas or Midsummer; and perhaps when he does, the parties who employed him are dead, bankrupt, or fled, or refuse to pay him altogether. Indeed, so general is it here to pay medical men but once or twice a year, that the first merchants of the town often take or affect offence if dunned or solicited sooner for payment. Many allow their bills to run on for years, not wishing to offend or lose the connexion, and in the end often get nothing, through the insolvency and dishonesty of the parties. Some of the physicians collect their own debts; call at the offices or houses of the patients day after day for this purpose: many have the appearance of visiting the sick, when they are only on their dunning excursions. Others, again, keep what they term "a collector," who gets so much per cent. on the debts he collects: he knocks at the door, or goes to the counting-house; shews his credentials authorising him to collect for Doctor so and so, and then asks for the amount. In nine cases out of ten, he is sent away with the answer "call again, the cash-keeper is out; or, the Doctor's bill is exorbitant; I will not pay it: Doctor so and so, when he attended me, only charged such and such sum." And the result is, as might be anticipated, that there are few medical men here, of any standing or practice, who have not on their books hundreds and often thousands of pounds of bad debts. The late Dr. M'Cartney is said to have left, in this way, some thousands at his death. The late Mr. Park had nearly twenty thou-

sand pounds due to him when he died. The present learned Professor of Medical Jurisprudence, in the University of Edinburgh, though not in the most extensive practice when he resided here, had more than twelve hundred pounds due to him when he left Liverpool. Those I name because they are either dead or removed from us; others I could name, living among us, whose debts are still more significant of the impropriety of this system. Thus every thing assumes the character of a regular commercial transaction, and thus we are reduced to the condition of tradesmen, without their legal protection in the recovery of our debts; and hence so many medical men become insolvent or bankrupt here, and hence so many die among us without being worth one shilling from their practice, and leave so often their families in poverty and distress, though for years apparently in the most extensive and lucrative practice.

We differ also from most places as to the charges of our medical men. In this respect the greatest latitude and variety prevails. The fees of surgeons range from one shilling to five; some are very glad to charge only for their medicine. The charges of physicians are comparatively as low: they average from three to seven. Indeed there is no fixed or regular scale. The principle implied and acted on, is, to get and take what one can,—every one for himself, and God for us all. Some years ago, a meeting of the physicians was convened, to adopt some fixed and regular scale: it was there agreed that the first visit should be one guinea, and every two or three subsequent ones another. Yet but a few weeks elapsed before they broke through their own solemn and deliberate act; and, what is strange, is, that it was the junior medical men who adhered to the letter and spirit, whilst it was the very heads of the profession, the very persons who convened the meeting, that first exhibited their disregard of their own scale: one of them, a Scotchman, then at the top of his profession, and since dead, when charged with not abiding by the rules, is said to have replied, "What, mon! do you think that if I canna get seven, that I will not take twa shillings?" Since we take what we can get, enter into the most *cutting* and commercial competition with one another, bating one another down by our low charges, and thereby ruining ourselves and the general practitioner, there is no town where we are worse paid; and the fault is our own. What can one expect, when the first physicians, men of large private fortune, and most extensive consulting practice, some of them graduates of the English Universities—men who, from their position, wealth, and standing in society, might get what they please—what, I repeat, can one expect when such men charge only seven shillings a visit for consultations, and some of them a great deal less? The veterinary surgeon will not attend a horse or a cow without five shillings a visit; the porter will scarcely run across the street, or carry a message, for less than one or two. Some physicians, and those even attached to public institutions, attend on all occasions here, whole families, for four or five pounds a year each; others, again, attend the families of the directors and managers of theatres, merely for a ticket for themselves or their families to go to the play when they please. These contracts are usually reduced to writing, or made in the presence of a third party; and what seems almost incredible, is, that some of those who enter into them keep their carriages, and are men of large and dashing fortunes.

It is true, there are one or two—and only one or two—and those neither in the first-rate practice, who charge ten shillings a visit; they are the exception, and not the rule; and had others done the same, they could as easily get ten, as seven, or three; it only requires unanimity, and adherence to some fixed and definite scale. At present every one gets what he can, undersells his neighbour, and hence we are estimated like other goods, by the prices in the market. People will refuse to pay dearly when they can buy cheaply; and what is the result of this want of union and co-operation among medical men, of their mutual jealousies, competition, and low charges, but general poverty and want, except where private means exist to support them! There is no class in the community here, in which there are not men every day dying possessed of great wealth from the accumulations of the profits of trade and business: merchants, tradesmen, brokers, attorneys, &c. frequently retire with a fortune after a few years of business, or raise themselves and their families from comparative obscurity and indigence, to

wealth and station in society; but no such instances occur in the medical profession, but the very reverse; yet young men are every day crowding into it, with such prospects before them, and lecturers are every day haranguing them on its dignity and etiquette, notwithstanding the evidence of their senses to the contrary. They would do a great deal more good to them, though not to themselves, in cautioning them against the step they were about to take, if they wished to be repaid by their profession for their time and expense. A few good lectures at the opening or closing of our medical schools, to this effect, would have all the characteristics of novelty and disinterestedness, and do much more good than all the flummery and false glare of the pictures they draw in their usual discourses. There is no *esprit de corps*, or union, among us, for mutual interest and protection; we calumniate, undermine, and undersell one another, instead of making common cause, as churchmen and others would do in similar circumstances. By this all suffer, and none gain. The medical men attached to the public institutions are often at variance with each other; those of the Dispensaries arrayed against those of the Infirmary, Town Hospital, and Workhouse; each often viewing the other with distrust and superciliousness. But I must reserve this and other matters for my next. I wish merely to exhibit, without colouring or exaggeration, our position here, in the hopes of awakening better feeling, and a juster sense of what we owe ourselves and the profession.

Liverpool, Feb. 26, 1834.

QUALIFICATIONS FOR DIPLOMAS —THE PRESENT CERTIFICATE SYSTEM.

To the Editor of the Medical Gazette.

Sir,

The medical public is indebted to your pages for many valuable observations on the improvements that might be effected in the profession generally, and also on those which are indispensably required in medical education.

There is an evil connected with the existing system which appears to have escaped your notice, and to which I beg leave to direct your attention; it is with reference to the qualifications at present demanded by the several public bodies, before a candidate can be admitted to an examination before them.

To obtain an examination for a degree, diploma, or license, the student finds that the attainment of two things is necessary: first, of certificates testifying that he has attended certain courses of lectures; and secondly, of a certain quantum of knowledge, the *necessary* amount of which it is not easy to estimate.

Without the possession of the certificates the candidate cannot be admitted to an examination, inasmuch as the object of them is to afford evidence that he has had certain opportunities of acquiring information; it being tacitly admitted, as it ought to be, that an examination alone is an insufficient test of the qualifications of a candidate for the practical duties of medicine or surgery. These certificates have no reference (or at best a very vague one) to the extent to, or the manner in, which their possessor availed himself of the opportunities he enjoyed; they merely attest his having possessed them; stating that he had been *personally present* at a certain number of lectures delivered during a particular season, which is the literal interpretation of the certificate phrase. "Mr. —— has attended a course of lectures," &c. I believe no lecturer will venture to pronounce upon the degree of *mental* attention of any member of his class with such certainty as to feel satisfied that he does not merit a certificate. There are a few flagrant cases that may be easily decided upon; but I think most persons will agree with me, that these are but few; it therefore appears to be the justest interpretation of the word "attend,"—"*to be personally present.*" How little, then, can be inferred as to the general qualifications of a student, from his having obtained any number of such certificates! Yet such is the evidence of medical education required by our public bodies, whether they be entitled to confer degree, diploma, or license.

The effects of this system on the students at the great schools of these kingdoms, will be found to depend very much upon the nature of the final examination. The laxity or strictness of that examination will exert a direct influence upon the whole tenor of the student's career. Those branches of me-

dical science which form the subject matter of the final examination, will receive the principal share of attention; but those which do not enter into it will be totally, or in great part, neglected, although they may be of great value and utility to the practitioner. There are two branches in particular, which, I think I am justified in saying, at present receive little or no attention from the great body of the students in this metropolis, and which, therefore, serve to illustrate my remarks; they are, first, morbid anatomy, without a correct knowledge of which, the practitioner is, to say the least, incapacitated from contributing his mite to the treasury of medical facts; and, secondly, forensic medicine, a branch of science which is every day taking a more exalted station, and through ignorance of which many a practitioner has injured himself almost irretrievably.

In proposing a remedy for an evil which is productive of such, and perhaps worse consequences, I shall take it for granted that degrees, diplomas, or licenses, will still continue to be granted by some body, or bodies, authorized by law; that the system of instruction by oral lectures will continue—for I can see no other system which can be made so beneficial; and that evidence of having conformed to a certain plan of education, will continue to be tendered to the said body, in the form of certificates. My proposition is simply, to make it a condition necessary in order to obtain a certificate of attendance on any given course of lectures, that the individual requiring such certificate shall have passed one or more examinations, during the continuance, or at the conclusion of that course. Thus, supposing that for a certain diploma it is required that the candidate should produce a certificate of attendance on two courses of the practice of medicine, the possession of them will, under the proposed system, imply that he has passed a certain number of examinations to the satisfaction of his lecturer.

To obviate certain objections which obviously may be started against this plan, it would be necessary to go further into detail than my present space will permit. Were it so arranged as that the several organized schools should constitute the colleges of a metropolitan university, this plan might be fully carried into effect, and the whole outline of medical education assimilated to the present system of general education at the English Universities. It would tend very much to create a spirit of proper emulation among the schools, and with the most solid object—that of sending out the best-instructed students; and it would have the beneficial effect of extinguishing the *ad captandum* system, which prevails to so lamentable an extent in the present day.

I have the honour to be, sir,

Your obedient servant,

R. B. Todd, M.D.

5, Hart-street, Bloomsbury,
March 10, 1834.

SIR CHARLES BELL'S VIEWS OF THE NERVOUS SYSTEM.

To the Editor of the Medical Gazette.

Sir,

In the last number of your journal, there is a letter bearing the title, "Sir Charles Bell's Doctrine," wherein the writer professes to oppose, under this general expression, what can only be regarded as a part of that gentleman's opinions. After speaking, in a somewhat imposing tone, of "statements of facts," yet without presenting a single circumstance that can be construed into a fact, but deserves only the name of *assertion*, he concludes—"if such be the facts, Sir Charles Bell's doctrine is unfounded."

The whole subject, thus summarily dismissed, is treated so shortly, being in the compass of three or four lines, that it is difficult to understand what is the precise theory or system to which he refers; but the reader is left to suppose, that Sir Charles Bell's "doctrine" consists in the opinions which he has delivered about the nerves of respiration; for these, and the middle column of the spinal marrow, are alone alluded to.

The principle, however, as I would prefer calling it, which Sir Charles Bell has maintained from the beginning, is very different, and far more extensive. It is, that nerves which arise by distinct origins are endowed with distinct and appropriate functions; and that it is the variety in the functions which the organs of the body have to maintain, that is the cause of the complexity of the nerves. Thus it is his opinion, as the most simple example, that when a nerve

arises by a single root, it is possessed solely of one kind of nervous property. In proof of this, the portio dura of the seventh pair, or the ninth nerve, has only one root, and it accordingly is endowed with only one function, viz. that of bestowing motion. If a part of the body has both sensation and motion, it receives these two properties through the medium of distinct nerves, or nerves arising by two distinct roots. The fifth pair has a double origin, and it has, on that account, two separate functions. The greater root, which possesses the ganglion, and is distributed to all the cavities and surfaces of the head, bestows sensation alone; while the lesser root, which passes free of the ganglion, and is confined in its distribution to a small class of muscles—those of mastication—confers motion alone. The thirty spinal nerves are illustrations of the correctness of the same principle; they are all similar in character to the fifth pair; that is, the ganglionic, or posterior root, bestows sensation alone, and the anterior root bestows motion alone; and when the distinct roots are united, the nerve has compound properties.

But when we have advanced thus far, a problem next presents itself—What is the meaning of the remarkable intricacy of the nerves in certain parts of the frame? Why should the brain and spinal marrow be formed into numerous subdivisions, and tracts of nervous matter? and why should the nerves proceeding from these distinct parts cross each other to reach their destinations, or crowd together, from various sources, to supply the same organ, or exhibit such a complicated interlacing of their fibres? If we have ascertained that the particular nerves, where they arise immediately from the brain, and before they have become united with others, are either destined for motion, or for sensation (whichever it may be), we have made a great step in the inquiry; but we have not removed half of the difficulties. Before we can know accurately the peculiar kind of motion, or kind of sensation, which is enjoyed by one nerve in contrast with another, or solve the question why this nerve should be connected, in the particular manner which we find that it is, with others, it is necessary that we be perfectly acquainted with the nature of the actions performed by the muscles to which it is distributed, or with the peculiar sensibilities of the part. That appears a simple thing to accomplish; but the concatenated motions in the orbit, face, throat, windpipe, thorax, are of the most difficult kind to analyse and distinguish: and yet, until we have an exact knowledge of the complicated actions carried on in all these parts, and the sympathies by which they are connected, we may despair of possessing definite notions as to the functions of the individual nerves, which are especially intricate in these organs, or as to the subdivisions of the brain or spinal marrow, from which the nerves come.

Thus it has obviously been the complex distribution of the nerves in their course which has been the cause of Sir Charles Bell's devoting so much attention to the functions of the muscles of the orbit, the muscles of the face, the muscles of the neck and thorax. It has been his aim, apparently, to reconcile the intricacy of the nerves, and the seeming irregularity of their organs, with the multifarious functions which have to be regulated by nerves. While making this attempt, there has been no part of the frame which has not been brought more accurately under our knowledge, from the investigations which he has been led to make into its varied actions, with the view of discovering why the nerves should be so peculiarly distributed. If he has not succeeded as yet, in the estimation of your correspondent, it does not appear to be the fault of the principle which he has assumed; but it must be owing rather to the extent and difficulty of the inquiry. Before, however, any one pronounces with "S. Y." that "Sir Charles Bell's doctrine is unfounded," it is fair to require from him that he will likewise go over the whole subject fully; that he will examine with care the nature of the functions of the several organs to which the nerves are distributed, and by analysing them, present a classification which can be preferred.

Allusion is made by your correspondent to the account of Sir Charles Bell's opinions, which you have extracted from his "System of Anatomy" into your pages, as if that were the only source of his knowledge. He should be informed, that these extracts, and even all that is contained in the System of Anatomy, present only a condensed and limited view of these questions; and that to understand the whole subject perfectly, he ought to have consulted the

author's last publication — his quarto work on the "Nervous System."

I have the honour to be,
Your obedient servant,
S.

March 10, 1834.

SOME REMARKS ON DR. PROUT'S BRIDGEWATER TREATISE.

To the Editor of the Medical Gazette.

Sir,

It would perhaps have been as well if Dr. Prout had not, in his Bridgewater Treatise, again brought on the carpet the subject of a late discussion. As, however, he has chosen to do so in his usual style, in the following passage, I feel myself called upon to make a few observations on this his second attempt to explain the process of digestion. I may observe, in passing, that it does not exactly appear why, in this Treatise, he should have encroached on the department of another gentleman, so eminently qualified for the task, appointed to treat the physiological part of the subject, and thus given to his Treatise the incongruous title "Chemistry, Meteorology, and the Function of Digestion."

In page 512, he observes—

"We dwell on this point the more, because, from deficient recollection of what electricity is, and what are the living powers acting through the nervous system of animals, it has been maintained, nay, has even been endeavoured to be experimentally proved, that these nervous powers are identical with the powers of electricity. It is impossible to imagine a greater fallacy. Admitting that electricity, properly directed, could change the proximate elements of the food into those of chyle, can we imagine this principle to vary spontaneously its mode of operation, so as to produce the same chyle from every sort of aliment*—that electricity is an intelligent agency, acting with a certain object? Besides, if the nervous agency be identical with electricity, how different must be its functions in different nerves; in one nerve, for example, digesting and assimilating the food; in another, conveying sight; in a third, conveying sound, in the brain itself shall we say actually thinking! As to the experiments on which it has been attempted to rear this untenable opinion, they prove nothing whatever, and are easily explained on other principles." But here, according to Dr. Prout's usual method, he considers the assertion sufficient, and adds, "Such explanation would be foreign to our present object, were we to introduce it here."

The facts ascertained by the experiments Dr. Prout here refers to, are—1, that the nervous influence is capable of passing through other conductors than the nerves, it having been shewn that it is more or less capable of its functions after having passed through a space of not less than a quarter of an inch between the divided ends of the nerves which convey it; 2, that when the stomach is deprived of any considerable part of its nervous power, whether that supplied by the brain or spinal marrow, it is no longer capable of secreting the gastric juice; 3, that when the lungs are in like manner in either way so deprived, they in a few hours not only become incapable of their functions, but their structure, being more evident than that of the stomach, in many parts is sensibly and wholly changed; and, lastly, that if under such circumstances voltaic electricity of a certain power be sent through the stomach and lungs by the lower portions of the divided nerves, as soon as the division of the nerves is made, and the upper portion displaced, the secretion of gastric juice, and the function as well as structure of the lungs, continue as perfect as when their nervous influence is entire.

It is a pity that Dr. Prout did not give his explanation; because, as he does not call in question the results of the experiments, the reader, I think, must have some curiosity to know how he makes the application of the observation just quoted—namely, "that they prove nothing whatever, and can easily be explained on other principles than that of galvanism performing the function of the nervous influence."

I think it will be admitted, after due

* So confused are Dr. Prout's ideas on the subject, that he does not perceive that it is in the formation of the gastric juice that voltaic electricity performs the function of the nervous influence in the living stomach. The conversion of the food depends on the operation of the gastric juice itself. Neither the nervous influence, nor voltaic electricity, act on the food.

consideration, that it would be difficult to find a passage in any treatise, which betrays a greater want of knowledge, and consequent confusion of ideas, respecting the subject it treats of, than that just quoted from Dr. Prout's publication. He here not only confounds together the sensorial and nervous powers, but both with the vital principle; and ascribes to those he censures the confusion which exists only in his own mind. By whom has it been asserted that any of the sensorial functions can be performed by voltaic electricity, or that it can maintain any of the nervous functions when the vital principle is extinct? I beg to refer to papers published in the Philosophical Transactions of 1829 and 1833, for my opinions on this subject; which Dr. Prout has either not seen or not understood, for I cannot suppose that he intentionally misrepresents them.

In some instances, Dr. Prout has so modified his opinions, since the publication of his lectures, that certain passages in his present Treatise directly contradict the corresponding passages in them. In others he maintains, and endeavours to enforce, some of the most exceptionable of his former positions.

Thus, for example, in his lectures he observes, "In France, most substances are exposed, through the medium of oil or butter, to a temperature of at least 600°, by the operation of frying, or some analogous process. They are then introduced into a macerating vessel, with a little water, and kept for several hours at a temperature far below the boiling point, not perhaps higher than 180°; and by these united processes, properly conducted, the most refractory articles, whether of animal or vegetable origin, are reduced more or less to a state of pulp, and *admirably adapted for the farther action of the stomach.*" In his present Treatise he observes (p. 509, speaking of French cookery), "In one respect, indeed, that of reducing to a state of pulp those refractory substances which we have before mentioned, the culinary processes of our neighbours are much superior to ours; but in nearly every other respect, and most of all in the use of pure sugar *or pure oil, their cookery is eminently injurious to all persons who have weak digestion.*" I had suggested to him, that the frying with butter, or oil, notoriously renders food indigestible. Other similar instances might be adduced, particularly relating to what he calls the organization of the food.

What does Dr. Prout mean by different degrees of organization? matter is either organized or unorganized. With what he says on this subject no distinct idea can be associated, either in his own mind or that of his reader. It only contributes, with his other inaccuracies, to the confusion which all who peruse either his Lectures or his Treatise must perceive.

But in the majority of instances we still find him straining to make the phenomena suit his preconceived opinions. Thus he still maintains that the reduction of food to a state of pulp renders it more digestible, although every ordinary dyspeptic can tell him that the lean part of a mutton-chop, moderately done, is more digestible than any stew he could prepare for him; and, in p. 507, he ranks alcohol among the things of most difficult assimilation, although it is well known that is not only easy of assimilation itself, but for the time, perhaps, more than any thing else, assists in enabling the digestive organs to assimilate other things. He confounds the injurious effects of the habitual use of alcohol, which depend on the hurtful excitement it occasions, with a supposed difficulty in its assimilation. If Dr. Prout's opinions had not shut his mind against the simplest evidence, he would have perceived that, of all solids, the unreduced muscular fibre, and of all liquids, diluted alcohol, are the most easy of assimilation. It is notorious that the latter can often be assimilated by stomachs which can assimilate neither wine nor beer, which he would persuade us is of so much more easy assimilation. The other properties of either animal food or alcohol are questions of a wholly different nature. We should neither recommend alcohol in diseased liver, nor a slice of mutton to a man labouring under fever; but it is certainly, neither in the one case nor the other, because they are difficult of assimilation.

Dr. Prout's theory is, unfortunately, as much in opposition to simple matter of fact, in what he says of sugar, as of alcohol; for every dyspeptic will tell him, that the purest crystallized sugar is more easy of assimilation than either soft sugar or molasses.

His present view of the digestive process is radically defective, in the same way as that given in his lectures. It is to the chemical part of this process alone that his attention is directed, the cause of many of his inaccuracies. His only attempt is to determine the effects of the secreted fluids on the food. On the manner in which the organs which secrete these fluids, and consequently the fluids themselves, are influenced by the different kinds of food, and other causes; and on the powers by which their due application to the food is regulated, powers no less essential to the process of digestion than the chemical properties of these fluids themselves, and the derangement of any one of which, as we see in certain states of disease, deranges every part of that process, he is altogether silent; and consequently respecting the various circumstances which have been determined respecting these essential and most characteristic parts of the digestive process, by some of which design is more simply, and consequently more impressively displayed, than in the nature of things can be done by any of the chemical parts of the process. Where can design be more strikingly displayed than in the manner in which the gastric juice, with the exception of that part of it which is secreted previous to the meal, and when there is little else in the stomach, is so applied to the food, that every particular particle of food, however copious the meal, is equally exposed to that juice at the moment of its secretion; and therefore, before it can be diluted, and thus its powers impaired by the other contents of the stomach, and with an accuracy which sets at defiance all the art of the most careful manipulator; and yet the means employed for a purpose apparently so difficult of attainment, are equally simple and effective. Since, as far as we may judge from the whole of the circumstances, Dr. Prout appears to have volunteered the appropriation of this part of the subject, he should have been particularly careful to fulfil in it the intention of the testator. He observes, that unfortunately cooks are seldom chemists—a circumstance, on the present occasion, less to be regretted than that chemists are seldom physiologists.

This second and most uncalled for aggression of Dr. Prout, I confess, has a little exceeded my patience. It cannot now be maintained that I am not referred to. He has not sufficient delicacy to perceive that, in our late discussion, I wished to spare him as much as my own vindication permitted; for the truth of which I can appeal to what I said to my friends, both at the time and since. This appears, indeed, in the discussion itself, in which I take every opportunity of complimenting him, where it appeared to me there was any opening for it. I now tell Dr. Prout, that if the style he has assumed be continued, I shall give to the public an analysis of his long last reply (the work of some weeks) in the discussion just referred to, which will shew how far he is entitled to erect himself into a judge of others in such matters, and state his decisions in the unmeasured terms he employs. It is but fair, since he assumes the office, that his qualifications for it should be justly appreciated.—I am, sir,

Your obedient servant,
A. P. W. Philip.

Cavendish-square, March 11, 1834.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

Medical Bibliography. A and B. By James Atkinson, Senior Surgeon to the York County Hospital, &c. &c.

If any one expects to find in this production a grave, steady, stupid book of reference, he will be undeceived by throwing it open at any page. The author is amusing himself throughout; he is a most learned *pun*dit, always in good humour, and cracking his joke whenever a subject for one offers—and that is much more often than perhaps it would to any other writer we have lately met with. Quips, and cranks, and *jeux d'esprit*, are lavished in rich profusion in every part of the volume; and those who are fond of personal bits of anecdote, will be pleased to perceive, that though Mr. Atkinson omits a special article about himself and his works under the letter A, glimpses of him are to be discerned—nay, he shines—in almost every article he has written. The work is appropriately dedicated "To all the idle Medical Students in Great Britain." We must give a specimen of the author's style. Under the head Belin-

GERUS, we find a theory regarding the nourishment of the fœtus noticed as "a monstrous good joke"—whence the author sets out on one of his sentimental excursions, as follows:—

"There is not perhaps any science wherein so many monstrous good jokes, and superlative romances, are exhibited, as in the science of medicine. For instance, it is a monstrous good joke in any practitioner, to suppose that his patients will always abide by him; and yet it is a common error. It is a monstrous good joke, to be observed, that men, of the first science and longest practice, cannot frequently gain the confidence of their patients; when a merry Andrew doctor and his mountebank can take a town by storm in a moment..... It is a monstrous good joke, that a medical man, who is confessedly without brains, shall contrive completely to suck the brains of another, who has not brains to perceive it. It is a monstrous good joke, to observe, sometimes, that the best informed practitioner in a town shall seldom get a fee, whilst the greatest medical fool in the town shall seldom miss one. It is a monstrous good joke, that one accoucheur of high diplomatic power, shall seldom be able to introduce a live child fairly into the world; whilst a man, only *secundi ordinis*, shall frequently bring two, and sometimes three; not leaving behind, of the three, one single fraction; and by that art merely, which my master, Dr. Denman, used to exemplify, as *simple Traction*. It is a monstrous good joke, that one worthy man shall get into the *will* of *every patient he doth kill;* whilst *another*, would as lief kill his *brother*. And, in medicine, it is no small *matter*, that as one doctor gets thin, the other gets *fatter*. But of all good jokes, that joke is the *best*, which has the good sense when to leave off; and to leave off with a *zest*."

The reader will observe, that the latter part of the foregoing passage is quite poetical; but it is a favourite amusement of the author thus occasionally "to build the lofty rhyme."

An Introduction to the Study of Human Anatomy. By JAMES PAXTON, M.R.C.S. &c. In two volumes. Vol. II. Sherwood.

IN this second volume, which completes the work, Mr. Paxton displays the same taste and ability which earned for him so much approbation on bringing out the first. Mere anatomy is allowed to be but "lenten entertainment," and requires, or is supposed to require, very often, on the part of the demonstrator, whether in book or lecture, such an effort, in the way of descriptive phraseology, as may render it endurable to the learner. With all this, the anatomical teacher must constantly appeal to the senses, and exhibit the actual things which he describes; and heretofore, if any one would teach anatomy effectively by book, he was obliged to illustrate it with expensive engravings, which formed a serious drawback on his own profits, while it was a heavy tax on the pockets of his readers. In the work before us, however, there is neither a pompous display of powers of description, nor any exhibition of cumbrous embellishment. The merits of Mr. Paxton are rested on the simplicity, the order, and the beautiful precision and neatness of his illustrations. The press, both at home and abroad, has teemed of late with volumes on descriptive anatomy: but we confess we have seen nothing hitherto that bears comparison with the present work in the qualities just specified.

The volume now published contains the anatomy of the absorbent system, of the nervous system, of the organs of sensation, digestion, respiration, and generation, and concludes with an account of the serous system, and cellular tissue. Nor is the work made up of mere dry anatomical details; it will be found to contain quite as much physiology as is suited to render it acceptable to general readers. We would refer particularly to the remarks on the sixth, or the muscular, sense, in which are appropriately introduced the fine observations of Sir Charles Bell (in his Bridgewater Treatise) on this subject; and the short chapter on visceral sensation is pregnant with matter of attractive interest.

The number of diagrams distributed throughout the volume is very considerable; and we think we may fairly say, that they constitute some of the finest specimens of wood engraving we have ever seen. There is an originality, too, in many of the views exhibited, which reflects much credit on the ingenuity of the author.

The following wood engraving is a representation of the excellent view given by Mr. Paxton, of the deep-seated nerves of the neck and thorax.

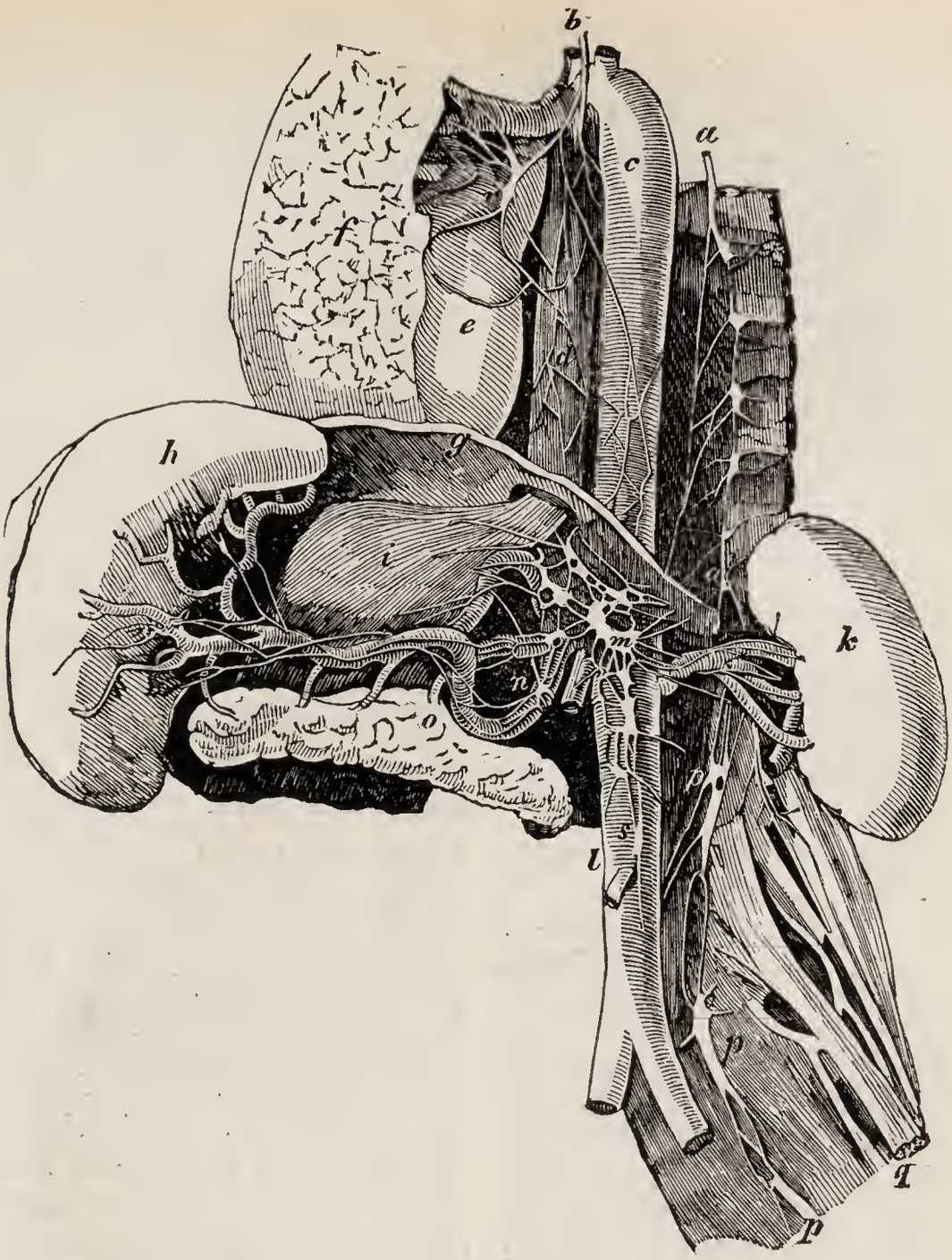
a, The superior cervical ganglion. *b*, The middle cervical. *c*, The pneumogastric nerve. *d*, The recurrent, or inferior laryngeal. *l*, The pharyngeal nerve. *t*, The superior laryngeal. *s*, The cardiac plexus. *n*, The coronary nerves. *k*, The cervical nerves, forming the bronchial plexus. *o p*, The cervical plexus. *i*, Phrenic nerve. *g*, Its course over the lungs to the diaphragm.

We are also tempted to present our readers with the representation of the principal ganglia and plexuses of the thorax and abdomen, as given by Mr. Paxton: for a woodcut, we humbly submit that the artist has acquitted himself in a style of superior excellence.

In closing this volume, we cannot help adding, that we are acquainted with no work on the same subject which is so well calculated to win the attention of the student: it is in every way adapted to render anatomy a popular, as well as a light and pleasant, study.

Description of the Engraving on following page.

a a, Thoracic ganglia. *b*, Pneumo gastric nerve. *c*, The aorta. *d*, Œsophageal plexus. *e*, Pericardium. *f*, Lung. *r*, Pulmonary plexus. *g*, Diaphragm. *h*, Spleen. *i*, Stomach. *k*, Kidney. *l*, Abdominal aorta. *m*, Semilunar ganglion, with the solar plexus. *n*, Splenic plexus. *o*, Pancreas. *p p*, Lumbar ganglia. *q*, Obturator nerve.



MEDICAL GAZETTE.

Saturday, March 15, 1834.

" Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE NEW "SCHEME;"

OR,

A PLAN TO GET RICH *BY DEGREES.*

WE have already directed attention to the fact, that the Council of the Gower-street Medical School have chosen the present very extraordinary moment to renew their application for a charter, with power to confer degrees in medicine; we say an extraordinary moment, because common delicacy ought to have prompted them to await the result of the parliamentary investigation already in progress. On this point we shall only add, at present, that so long as they continue their endeavours to establish a monopoly in conferring medical degrees, so long shall our efforts be directed to expose the unreasonableness of such demand, and the injury which would accrue to medical science from acceding to it.

In discussing this question, the nature and origin of the establishment which seeks for this important privilege ought never to be lost sight of. It is, as we have often taken occasion to remark, *a joint-stock company*, which originated at a time when the rage for

new speculations almost amounted to an epidemic insanity in England. Its founders were some of them men of the most liberal views; but many of those who became purchasers of shares expected to make fortunes by the profits which were to accrue from this novel species of traffic. As, however, the hopes of pecuniary advantages originally entertained by the interested, have gradually subsided, and as the sanguine expectations of benefit to the community, which had arisen in the minds of liberal enthusiasts, have died away, the management of the concern has lapsed by degrees into the hands of a few comparatively obscure individuals, with little of the influence or claims to public confidence which distinguished its early patrons. Simultaneously with this change, a system of puffing and pretension, highly discreditable to an establishment professing to be devoted to the purposes of science, was commenced, and has (with but one exception), been continued ever since. The exception to which we allude is formed by the report published by the Council last year, and which had the singular merit of telling the truth, without any disguise, and without any mystification. This report declared the affairs of the institution to be in so miserable and dilapidated a state, that without some extraordinary exertion—some skilful and speedy mode of raising money—it would be impossible for the University to go on, even for another session. The first "SCHEME."—we use their own most significant expression—the first *scheme* which presented itself to the Council, was, without loss of time, to procure a charter, with power to confer degrees on all subjects not theological (see Report, February 1833.) The idea was good, for it was now clearly perceived that the establishment was, evidently to stand or fall by its medical school, and that as no other institution existed in the metropolis where the doctorate in physic could be obtained, a tolerably snug monopoly in teaching medicine might thus be secured. The solicitations at the Home Office were therefore renewed forthwith, and some of the shareholders who had seats in parliament very disinterestedly brought the subject under the notice of the House of Commons.

Thus, probably for the first time in the records of speculation, even in this country of adventure, was a joint-stock company established for converting science into a matter of traffic—or were the holders of shares in a declining market bold enough to apply to the government for power to sell degrees in arts, and barter professional distinctions, as a means—and here again we quote their own words—as a means "to provide for this failing state of the finances, and for the future carrying on of the institution*."

Such is the motive which has led to the urgent solicitation for this important privilege—a motive which we do not attribute to them in the heat of controversy, or in the spirit of opposition, but which is openly, and we must say we think most unwisely, avowed by the Council themselves in their address to the proprietors. On the interested nature of the motive, then, it is unnecessary to dwell; but we must call attention for one moment to the consequences of acceding to the demand.

And first we say, that to grant the request urged in such a questionable shape, would tend, in a degree which no prudent government would despise, to break the confidence of a large and influential body of men, in the wisdom and integrity of their rulers. Another, and obviously a much better, mode has been proposed, by which the Dissenters might be freed from the inconveniences under which they labour; and if such proposal should

* Report published by the Council, Feb. 1833.

be set aside to confer a monopoly on the London University, one explanation of the transaction, and one only, would remain—for no man gifted with common sense could hesitate to recognise it as an abandonment of every principle which the present administration, and the original founders of the London University, have professed, and as a sacrifice of their consistency to propitiate a few shareholders in the House of Commons.

The privilege of conferring the highest honours in the learned professions of medicine and the law, to be vested in a joint-stock company, whose shares—reduced to one-fourth their original price—are bought and sold in the market with Poyais Bonds and Mexican Mines! Let this be done, and for the moderate sum of 25*l.* any quack or spine-doctor in the kingdom may become a proprietor of the University, and thus possess a direct influence over the polity of the liberal professions. But even admitting this to be an extreme case—which, however, a perusal of the list of stewards to the hospital dinner convinces us it is not—still it cannot be denied that it is absolutely impossible for the government to foresee into whose hands the power, if once delegated, might pass; nor will any one, we presume, be bold enough to anticipate favourable results to science from a state of matters so incongruous—so unprecedented—and so repugnant to all that befits the awarding of honours, either to the elegant accomplishments of literature, or the graver acquirements of professional learning!

Were there no other mode by which the Dissenters might be freed from their present disabilities, it might, perhaps, be matter of reasonable doubt whether it were not better to concede to the Gower-street establishment the power they seek, rather than to refuse such relief altogether, great as are the anomalies, and grievous the evils, which would result; and this consideration it is which we have ascertained has influenced several of those members of parliament who have expressed themselves favourable to the grant. But we must add, that the moment it has been explained to them, that the expediency of conferring academic honours in London, unfettered by ecclesiastical distinctions, is not only not opposed, but strongly advocated by the teachers in the great medical schools of the metropolis, they have at once acknowledged the justice of opposing any exclusive grant to the so-called "University," and have become converts to the plan which was originally proposed in this journal so early as October 1832. The plan, indeed, is very simple, and conveys no hostile manifestation whatever towards the school in Gower-Street. It is, that the power of conferring *professional* ranks, titles, or qualifications to practise, should be conferred on no individual establishment, but on one so constituted as to be perfectly independent of them all. Now this is the prayer of those connected with all the medical schools of repute in London, including several of the principal Professors of King's College, and excepting only the London University. To endeavour, therefore, to represent this as the opposition of a conservative clique—a mere "medical coterie," as the great advocate (we beg his pardon, the great *solicitor*) of the University has done, we must say, is both uncandid and unfair. The "coterie" includes above seventy medical men in the metropolis, who occupy positions of no secondary rank, whether they be considered as practitioners or as teachers. But it matters little what view is taken by those who hold a deep stake in the University, and are therefore too much interested in the result to be capable of judging impartially on the subject; for effectual means have been taken to open the eyes of those with whom the decision must rest, and we have no fear that the pre-

sent government will suffer the establishment of a new monopoly, and thus raise for themselves a monument, to record their own inconsistency; or that they will break through the exclusive system of former times, and remove corporate abuses in other quarters, only to establish a close and more profitable trade for the members of their own political party.

The result to be apprehended, is not that ministers will grant the power of conferring degrees in medicine on the London University, but that, finding contending petitions, they may be led to refuse the power alike to all, and thus the benefits which would result from so desirable an acquisition be ultimately lost. Some of those who take a deep interest in the affairs of the Gower-Street institution, profess their admiration of the prineiple of *co-operation*. Thus, for instance, Mr. Tooke, in presenting a petition from Mr. Owen, a few days ago, in the House of Commons, declared that gentleman to be "entitled to credit, for calling public attention to the superiority of the principle of co-operation, as compared with that of competition; the one eliciting all the better feelings and charities of our nature, and the other exciting all its most hateful passions." Let the honourable member, then, act upon his own doctrine—let him "co-operate" with those connected with the other schools, instead of suffering his "most hateful passions" to be excited by the baneful spirit of "competition." We repeat, that those connected with all the schools, except the London University, are agreed in petitioning that the power of conferring degrees be vested in some central body, alike open to the pupils of all—alike independent of the teachers of all. They seek nothing for themselves—they desire to withhold nothing from the London University which it is content to participate with them. Let Mr. Tooke and his friends "co-operate," and the cause of the Dissenters is won; for were the petitioners unanimous, there is every reason to believe that the government would at once concede the boon.

A BUSY bustling proprietor and member of the Council of the London University, wrote, a few days since, to the Editor of the *Times*, a letter, the object of which is not, indeed, to meet us fairly, but to insinuate, with the hope, probably, of being credited by the ignorant, that we have employed "falsehood" and "interested delusion" against the University. But we have dealt in no vague generalities; we have given dates and numbers, circumstances and specifications, on the authority of the printed reports of the Council. "Wilful ignorance," too, there may be, but it rests not with us; and if W. T. (for such is the signature), will come to particulars, instead of mere unsupported assertions, and shew that any errors have been committed by himself or the other members of the Council, in their published documents, or any unwarrantable inferences drawn by us from them, we pledge ourselves to give them the full benefit of the correction. Meantime we recommend to the learned solicitor to keep his temper, to whatever extent he may happen to be a shareholder in the concern, and however forlorn the hope may now be of the "scheme" of obtaining an exclusive market for the sale of degrees becoming available. It was certainly provoking that the Governors of the Middlesex should have scouted his plan of buying the right of appointing two of the "professors" of the London University to the medical staff of their hospital, for the profferred sum of 2000*l.*; but still this is scarcely a sufficient reason for classing all the great schools of the metropolis as "medical coteries," opposing, on illiberal grounds, the "scheme" for raising the shares of his joint-stock company. Neither does the failure of the speculation justify

him in accusing *others* of "interested delusion," without adducing, and we take leave to add, without being capable of adducing, a single fact in corroboration of his assertion. We cast back his imputation with scorn;—"falsehood," we believe, there has been, but he must seek elsewhere for its authors.

PARLIAMENTARY COMMITTEE.

The oral examinations commenced on Thursday, when Dr. F. Hawkins, Registrar of the College of Physicians, was examined. We believe that it was intended to have begun with the evidence of the learned President, but that some preliminary information was desired respecting certain documents. The evidence is to be printed as it is taken, but only for the benefit of the members of the Committee. To publish it would amount to a breach of privilege.

CLINICAL LECTURE ON CASES OF HERNIA;

Delivered at the Middlesex Hospital,

By Sir Charles Bell.

AFFECTIONS OF THE PORTIO DURA.

Before I proceed to my proper subject, which is Hernia, I cannot help expressing my surprise at the number of cases of affections of the nerves of the face which have occurred to us during the last week. You have had before you a case of affection of the portio dura of the seventh pair, in a patient in Hertford Ward, where the symptoms appear to have been produced by pressure on the nerve, near the stylo mastoidean hole, for every part to which the nerve is distributed was affected. I had a case of paralysis of the face of the same kind, sent to my house by Dr. Marshall Hall, who kindly conceived that I might have an interest in it. The patient, a little old man, gave me a cock-and-a-bull story about the cause of it. It seems, that when his mother was pregnant, she was frightened by the noise of a pig under the knife of the butcher, on which she clapped her hand to her ear; and thence the misfortune to her offspring, this loss of power in the side of the face, and this pendant ear, which hangs over like a hound's or a pig's. He has been deaf, as well as paralytic, on that side, since his childhood. Dr. Copland, with the same kind intention, sent me a man in a similar condition. His story was, that in a Christmas gambol he got his ear pulled, which was followed by pain in his ear, and deafness, and after some time, by the loss of power in the muscles of one side of the face. That is the patient now in Stafford Ward; and you have an opportunity of observing the characteristic symptoms of an affection of the portio dura within the ear, and, as I am much afraid, where there is some affection of the base of the brain. Mr. Elwyn will inform you, that on softly approaching the patient's bed while asleep, he observes that he contrives to lie on the pillow in such a manner that his cheek is forced up, so as to close the eye-lids. I have noticed, in other patients who had paralysis of the muscles of the face, that they avoided lying on the sound side, because the pillow obstructed the motion of the nostril that was free. Since the occurrence of these three cases, two others have been presented to me, one of which is an instance of a very interesting kind, as proving the effect of the division of the portio dura. Some few years ago I should have given all my goods to have had such a confirmation of my opinion regarding the office of the portio dura. This gentleman came to my house, accompanying his sister, who was my patient; his appearance was very remarkable, and I confess distracted my attention not a little. After giving my advice to the lady, I ventured to ask him a few questions, which he answered very politely and good naturedly. His features were drawn to one side in the most extraordinary manner I had ever seen. His mouth appeared to open upon the right cheek; the motions and animation of his features were altogether confined to the right side; the other side of his face was a mere inanimate mask: the eye-brows remained motionless, the eye-lids open, and the skin of the cheek drawn tight. He had perfect sensibility, though no motion. This more than ordinary distortion is attributable to the peculiar cause: for in the cases that I have had an opportunity of shewing you, the nerve was morbidly affected, but not destroyed. More or less disease in a part in the neighbourhood of the nerve, or inflammation around it, or pressure upon it from a swelled gland, may produce such appearances as you have beheld; but in this case the nerve had been totally divided, and at an early age. He told me, that when at school, he, with some of his companions, undertook the rolling up of a cask; the cask recoiled, bore him down, and the end of one of the hoops caught him under the ear. The hæmorrhage was very great, and to suppress it they had to stuff the wound. When he had the opportunity of observ-

ing, he found that he had lost all motion of that side of his face. I have no doubt that the trunk of the portio dura had been divided. The effect, altogether, of the loss of the office of the portio dura, on a fat, fair, good humoured countenance, is most lamentable. The remedies to which this gentleman submitted do not convey a very high notion of the knowledge of his medical attendants: for what could they intend by courses of mercury, electricity, and friction, when the sole nerve which animates the features was actually divided. Having had these cases before you, you will yourselves reflect on the condition in which a patient would be left, were you intentionally to cut across the portio dura for tic douloureux: his face would haunt you in your sleep.

FEMORAL HERNIA.

But I proposed to-day to make some remarks on these two cases of hernia, which you have just visited with me, both occurring in women, and in whom the operations have been successful.

Our progress in professional knowledge is not represented by a straight line: we do not move uniformly forward, but rather like a man on skates, whose efforts receive a bias, and who, after certain complimentary manœuvres to the admiring crowd, returns very nearly to the point of the circle from which he set out. You will be more sensible of this as you advance in life. In recommending you to study the anatomy of hernia, I may suggest this to you—that if you proceed in your dissection with a fine-edged scalpel, hook, and forceps, you may display all the fasciæ that have been minutely described in books, and yet remain ignorant of the exact ligament or tendon which strangulates the gut, or, indeed, of the nature of those passages through which rupture takes place. Let me, then, advise you to *feel* your way here. Suppose you were in the situation which I held early in life, that of assistant to a lecturer, and that he required you to make such a hernia on the dead subject as he could operate upon,—you must make your incision into the abdomen; you get your hand into it, and feel all round the inside of Poupart's ligament, and round the pillars of the rings, in search of the internal ring; but you find no outlet. The first thing you are called on to admire is how completely—how perfectly, this lower part of the abdominal walls is closed up—how admirably it is contrived that the viscera shall not slip out by the arch, under Poupart's ligament, which admits the vessels to the thigh, nor through the spermatic passage.

But being forced to make an inguinal hernia, you begin to work at that point where the vessels of the testicle or cord (scarcely yet a cord) pass through. The vessels of the testicle pass between the two portions of the transversalis fascia; and, at last, you bore in your finger, and make the passage wider and wider. What do you feel? You feel that towards the inside—that is to say, towards the pubes—you have a difficulty in enlarging the passage; you feel the sharp edge of a tendon or ligament, and that you must break it down by force, so as to bring the internal ring nearly opposite to the external one; at last, your finger slips out between the pillars of the external abdominal ring. Now this is an admirable demonstration, although there be nothing seen! You have, what is better, a distinct *feeling*—a conviction of what it is that makes the stricture, whether at the inner or the outer ring. Now you understand what I mean by recommending you to trust to the finger, or to the touch, rather than to the eye.

Formerly, in my course of lectures, when I came to this subject, I was happy to speak of Sir Astley Cooper's work as one creditable to himself, to the profession, and to the country. I conceive that in that publication the anatomy is perfect to its end; for I hold that the anatomy may be carried too far. You will say that is a strange opinion: how can it do any harm? By occupying your minds too much, to the exclusion of things more important; and I hold that the pathology of the intestine, from which the very rules of practice are drawn, is more important than the anatomy of the rings. Besides, it is quite possible, as I have seen, for students to dissect and work on the fasciæ of the groin and inside of the abdomen for the greater part of the season, to the neglect of many subjects equally important in practice. That is what I mean by saying that the anatomy may be carried too far;—it may occupy too much of your time and attention.

Now I wish that the abilities of my friend Mr. Guthrie had been directed to a different subject. By taking up this, he appears to me to be re-touching a portrait that was already finished. A picture which had been carefully composed, varnished, framed, hung up, and admired, he takes down again, and re-touches, and, I had almost said, daubs it with foreign colours. I am unwilling to acknowledge these foreign authorities, for, after all, their utmost merit is to have done in their own country what Sir Astley Cooper has given them an example of in this. I am not about to deliver any thing new: but I have always thought, and do now think, that in consequence of the discussions concerning the parts around the sac, there has been rather a neglect of the great principles of pathology which are to be drawn from the contemplation of the gut. I have

heretofore criticised freely some of the opinions in Sir Astley Cooper's great work, upon the same grounds that I would now criticise his commentator.

It is conceived that the stricture, in inguinal hernia, may result from the contraction of the muscular fibres of the passage. Now I would ask you, for already you are acquainted with the data on which we reason, do you observe any difference in the symptoms of a hernia when it comes through the spermatic passage, and when it comes under Poupart's ligament; when it comes through some of the accidental rents in the abdominal walls, and is called an abdominal or ventral hernia; and when it comes through the umbilical passage, and is called *exomphalos*; or when it is an internal hernia, and passes through the diaphragm or the obturator ligament? Is there any record of symptoms to distinguish the case according to the part through which the intestine passes? Is it not, on the contrary, universally assented to and understood, that the symptoms of hernia are the same, in whatever part the disease occurs? Now you observe how this bears upon the question, because, if the symptoms of a hernia be universally the same where there are muscular fibres and where there are none, it is pretty clear that these symptoms must be attributable to something else than the muscular fibres of the ring. Why is it that the pain is always referred to the umbilicus? Because the girding of a portion of the intestine is attended with an action in the intestine itself, and the pain is first fixed in that part, and then passes round, as in colic, attended with a twisting in the region of the umbilicus; which pain again returns to the part which is strictured, wherever the stricture may be. The irregularity, or rather the return of the pain, is the character which belongs to spasmodic action; but this spasm is not from the girding of the stricture around the intestine, but from the action of the intestine itself: it is a muscular tube, and in it, as in all muscular parts, the pain occurs in paroxysms.

But in order to keep our attention to points of practice, and not to fall into theoretical disquisition, I must now read a case of femoral hernia.

Irreducible Femoral Hernia—Operation.

"Mary Booth, 42 years of age, a married woman, was admitted into the hospital on the 19th of December, at one o'clock, with an irreducible femoral hernia of the left side. She first perceived it two years ago, and it came down when she was lifting a heavy weight. She was brought into this hospital, and relieved by the warm-bath and the taxis. She was dismissed; and from the time she left the hospital she has worn a truss, and has not left it off since. About eight o'clock on the 19th (five hours previous to her admission), when she was moving a heavy weight, she found great inconvenience in the seat of the rupture, and, on taking off the truss, she found the swelling had suddenly increased in size. A medical gentleman was applied to, who was, however, unable to reduce the tumor, and he advised her to come into the hospital immediately."

Let me observe, that if, as I have sometimes flattered myself, we have been, of late, more successful in cases of hernia, it is not owing to any improved principle or practice on our part, or our greater activity or dexterity, but to a general improvement. There is no practitioner in our neighbourhood who is not aware of the necessity of immediate assistance, and now the patients are brought more directly under our observation. This is, in fact, the cause of our better success.

"When she came into the hospital the taxis was employed, she was bled to syncope, put into a warm-bath, and the attempt at reduction made again, but in vain: the tumor remained of the size of a large walnut; not, however, very tense. There appeared a small swelling on the right side also; but for this she had not worn a truss. She was now very sick; and although she said that her bowels had been opened twice during the day, about two hours after her admission the pain became very severe, and extended all over the abdomen. At nine A.M. the bath was again employed, but without success. The surgeon of the week was sent for; he examined the swelling, and after the necessary consultation he determined on operating."

You saw the operation, gentlemen, and now I shall merely remind you of the mode of performing it. You may either draw a fine-edged knife over the integuments, or operate as you saw me do, by pinching up the integuments and cutting them while they are held so. The only advantage of this mode is that you do it at once, with little pain to the patient. You may, however, on making the incision, attempt, if you choose, to leave such a flap as will cover the neck of the sac, and enable you to put your compress on with more effect. Under the integuments were the fat and glands, and certain filaments of the external fascia mixing with the fat. After a little dissection, you saw we came to the neck of the sac—to the crescentic arch. Now, if you are operating, you should prosecute the dissection so as fairly to expose the crescentic arch, and consequently be more careful in clearing the neck of the sac than the body of the tumor. If it be a large hernia, you are not to draw the knife over its whole length. I have, many years ago, seen the surgeon, when

the tumor was large, draw his knife from the top to the bottom. If it be small, this must, of course, be done; but the object of the incision is to get to the neck of the sac, and it is not to be long, in proportion to the tumor. If you cut the whole length of the hernia, you have the whole mass of intestines in your hands; than which, nothing can be worse, for it is then difficult to reduce them: you are forced to handle them, tumble them about, and squeeze them; and when you reduce them at last, it is ten to one but you have inflammation of the whole mass, and death the consequence. Perhaps I should have reserved this remark for a case of scrotal or umbilical hernia; but it is enough that you understand me.

There is a peculiarity in femoral hernia; I mean the fineness of the sac. First, you have a sheath round the proper sac, which deceives you, because, owing to the regularity of its form, you are apt to take it for the true sac. It is not the sac, but the fascia over it thus curiously moulded. You catch it in a fold with the forceps, and, carrying your knife horizontally, open it; then you introduce the bistoury, slit up the membrane, and then you find what appears to be the intestine; and many have allowed themselves to be so deceived, thinking they have come to the intestine, because the surface now presented has so much of its shape and colour. Look narrowly into it, and you will find that you have not the blood-vessels as they should appear; or take the membrane between your finger and thumb, and you will feel the nucleus within—that there is still a sac, though a very thin one, between your fingers and the intestine. You open this, the true peritoneal sac, and out spurts a serous fluid. The serous exudation from the surface of the intestines and the interior of the sac, points out directly that you have penetrated the peritoneum, and now slitting it open, you see the little dark-coloured fold of intestine. This is the moment decisive of the patient's fate: you judge of success or failure by the appearance of the intestine. If it be very dark, you are alarmed. The intestine may be dead, and ready to slough, or it may be dark by extravasation, or in consequence of the mere gorging of the veins. You saw in this case, that, although dark, the vessels carried blood, and that I therefore thought right to reduce the intestine. Now, as to the manner of doing this, it is well to say that the finger is the best director; but take care that you do not use your finger here for that purpose, for by the attempt to squeeze in the finger between the neck of the sac and the intestine, you will be in danger of bruising the already tender intestine irreparably. You smooth down the gut and pass in your director, and then the bistoury along the groove of the director; and, keeping the points of these two instruments together, you separate them by raising the knife like a lever. You need not cut, or draw the knife, but just separate the two instruments, and the effect is that you do not cut the soft cellular texture, but only the part which resists. It is the firm edge of the sac and ligament which resist; and these only are cut. Need I say that your assistant should, in the meantime, carefully guard the intestine?

Now if you wait for a minute there is no harm—you may perhaps have the pleasure of seeing the immediate change in the colour of the intestines (for the circulation has been very much impeded); if it is free, after this delay it takes a livelier colour, which is the most favourable symptom you can desire. What do you do next? Push up the intestine? No; gently draw it down—*very gently*; because I beg you to recollect that where the intestine has been long held in the grasp of a sharp stricture, it is hurt and made tender; especially the inner coat. You gradually pull it down, because you have to press out the contents of the intestine, and if you do that while there remains any degree of stricture at the part of the intestine which has been long held and bruised, you may do a great deal of harm. You pull it down, in order to bring the healthy part of the intestine opposite to the neck of the sac; and then you compress the intestine. You do not even now attempt to push it up, but you compress it, so that the fluid which has accumulated in it (perhaps the fæces, but more likely a mucous secretion) is urged forwards. The intestine then being flat, with a very little assistance on your part it is drawn in; and if it be so drawn by the excited intestines within, that is another favourable circumstance, and promises well.

But suppose that it happens, as it occurred in this case, that when the sac is opened the intestine appears in an unfavourable state; what is to be done? You heard what my colleague said; he advised the gut to be opened, and I have often done it; but it is a most serious question, and is not to be done unless you have grave reasons for it. I remember being in consultation, in precisely the same circumstances, with my friend Mr. Brodie; whose plain good sense in these matters is above eulogy. He inquired, "shall we open the intestine?" I begged that he would put a warm sponge upon the intestine, and that we should retire for a moment. We did so; and it was agreed between us, that if the colour of the intestine recovered during the short interval, then it should be

returned; and further, if it did not appear to be decidedly recovering, that, without any further intercourse of signs or words, he should touch the surface with the point of the lancet; and if the blood came, that the intestine should be reduced. On returning to the patient, the blood did start from the touch of the lancet, and the intestine was returned. The patient recovered.

I will give you another reason why, in this case, I returned the intestine; for, paying all due respect to the opinion of my colleague, it suggested itself to me that the colour of the intestine was not such exactly as we find to be produced by congestion; it appeared more like ecchymosis, the effect of the severe pressure used during the employment of the taxis. It was this circumstance which influenced me to reduce the gut; and by the success of the measure, we may say that it was well the distinction was made. But, in passing, you will not fail to recollect the degree of injury that may be done to the surface of the bowel, by too much pressure in the attempt to reduce it.

The operation was performed at twelve o'clock; an hour after the operation a common injection was administered. At four o'clock the bowels had not been relieved, but the pain was less, and the patient had been dosing; the pulse 90, and soft; the tongue clean and moist. There were now given her six drachms of castor oil, and two drachms of tincture of senna. At ten o'clock the bowels were relieved once, and she then began to take a little calomel and opium—two grains of calomel, with a quarter of a grain of opium. In the morning she had slept a little; the bowels had been relieved three times in all since the operation; the pulse 96, and soft; slight pain in the abdomen; tongue clean and moist. I need not go on with these particulars, though it is right that they should be noted down; I will merely state, that every thing went on successfully.

I have only one remark to make on the treatment. At one time I entertained the idea, that after such an operation, and after the intestines had long suffered, as they must necessarily do in hernia, by working under their load, and when they were in a condition prone to inflammation, the best thing that could be done was to allow them to remain quiet under the influence of an opiate, and to evacuate only the lower part of the bowels by large clysters. But, after experience, I found it to be of the greatest consequence to have a full operation on the bowels, only taking care that it should be obtained by the mildest possible means. If you administer castor oil, it will probably be rejected; but if you add to an ounce of it three drachms of tincture of senna, it will be more likely to remain on the stomach, and produce a full and repeated operation on the bowels, bringing away scybalæ, and effectually relieving the intestines. When this is done, you have the fairest possible promise of success; yet even then we cannot be quite relieved of the apprehension of peritoneal inflammation.

Now there are some questions that suggest themselves from this case; and there are others arising from what I know to be passing in your minds.

With regard to the propriety of opening the gut, let us think what is the object of that practice. When the patient dies after the operation, you very often find that the part of the gut which was down in the herniary sac, has been so injured, that it has refused to act; that is to say, its muscular fibres have not been excited to the series of actions which should proceed in regular succession in all the length of the intestinal canal; and the portion that was included, though freed, has continued to be the cause of obstruction. When we think that the intestine is so far gone, by the process of incarceration (and strangulation supervening on incarceration), you are sure that the muscular fibre will not act, even after the stricture is removed, and the intestine reduced into the abdomen. When we find an intestine in such a condition, and we are very certain that it will not resume its action when reduced, it is better to slit it up at once, and to relieve the upper part of the bowels, introducing from the slit a clyster pipe, and allowing the accumulated flatus and secretion to pass off; for if you have understood the principle of pathology, you will recollect that the grievous symptoms in hernia proceed from the distention of the portion of the canal between the stomach and the stricture.

When by such means the pressing danger is removed, you have produced the case of anus at the groin, and have to think how that is to be managed.

But the next thing that occurs in the present case, and which I know you are discussing among yourselves, is the recommendation of removing the stricture without opening the sac. See, then, what took place here: I found, upon cutting the crescentic edge or the little wing-like process which goes down to the sheath of the femoral vessels, and which is continued from the lower or inferior edge of Poupart's ligament, that the stricture was not taken off. You saw that I had considerable difficulty; you saw that the operation was as tedious as it was difficult; but you could not see what I beg to assure you of, the great care that I took of the intestine, neither to finger it too much, nor to com-

press it too strongly, and for the reasons I have assigned. I found that the stricture was not removed, that it was in the neck of the sac, and not in the tendon. Those of you who were near me must have seen with interest, that the operation appeared to be finished—that the tumor disappeared—that the intestine was *removed from the eye*; but the case was not satisfactory to me; so that, after it must have been supposed by you that the operation was completed, you saw me draw the whole portion of intestine down again; that then the assistant took firm hold of the sac, pulling it down so as to be on the stretch; that I passed the director and bistoury again between the gut and the sac, and cut the stricture deep, a full inch within the crescentic arch. That which I cut was the edge of the stricture of the proper sac. You will now reflect upon what is stated in the narrative of the case, that from the time the patient first came into the hospital she had worn a truss. Remember what is the effect of a truss. The pressure of a truss produces a change in the peritoneal sac, and you have always to fear that a certain degree of stricture, or unusual firmness, will occur in the neck of the sac, when there has been a truss long worn. This is one of the disadvantages, contrasted with the many essential advantages, of a truss; it produces a condensation which entirely destroys the natural elasticity of the neck of the sac, and produces some cord-like filaments in it.

A patient was brought into the hospital moribund, and died; and we had an opportunity of examining him. He had been operated upon by the taxis, and the surgeon was convinced that he had done every thing required of him. A tumor was discovered quite within the muscular walls of the abdomen, which proved to be the strangulated intestine within the peritoneal sac; so that the surgeon had reduced the sac, and the intestine within it; and the stricture which produced the strangulation being in the mouth of the sac, there was no relief, and the patient died. Here, then, is the first thing that you will reflect upon when this question is agitated, regarding the propriety of opening the sac. Always remember that, in certain circumstances, the stricture is in the neck of the sac itself.

Now I go freely into this question, because I have studied it, as I stated before, and acted upon it long ago; I have repeatedly, within the last few years, in operating, taken off the stricture by dividing the tendon, and have reduced the intestine without opening the sac. Having done it, I say that I do not feel a disposition hostile to the practice; but I have to recommend you to be guarded, for you see that it is possible, even when the sac is opened, to reduce the intestine without relieving the stricture: how much greater the danger when the sac is not opened at all! On this very occasion, where I hope you saw that there was every care taken in the performance of the operation, I had got the knuckle of intestine within the ligament, and out of sight—to all outward appearance, successfully reduced. But the condition of the parts did not satisfy me. I thought of the dangers, and resolved to bring all down again, and to trace the edge of the sac to the stricture, and to make certain of its division. In certain cases, such as in a recent hernia, where it is quite clear that there has not been time for the condensation of the sac; and again, in a large hernia, it may be right to dissect the fibres from around the mouth of the peritoneal sac, and to reduce the gut without disclosing it.

The recent publication of Mr. Key on this subject is highly creditable to him; and I conceive it to be a very fortunate circumstance, when our great hospitals are in possession of those well-informed men, who have their minds alive to all the improvements, and all the important questions of practice. However, I do not mean to say that he conceives it is a new question. When I attended Dr. Alexander Monro, the father of the present professor, he delivered himself in the most animated manner on this subject. He was a thoroughly well-educated man in surgery, and he saw more surgery in consultation than most operating surgeons do. He had, in two or three cases, advised the operation to be performed without opening the sac, and these cases terminated successfully. I well remember, that he delivered himself on this subject with that liveliness of manner which shews a man to believe that he has made an important improvement. He perhaps carried the suggestion too far, or sustained it too ingeniously. He was so far short-sighted in this matter, as to conceive that the opening of shut sacs was very dangerous, owing to the admission of atmospheric air within them; and one of the cases which he brought in illustration led to a good deal of good-humoured criticism,—that of a man who died from inflammation of the pericardium. In the detail of the case, it appeared that "this shut sac had been opened by the thrust of a red-hot poker!" Most of us thought that there was sufficient cause of inflammation, independently of the admission of air, which doctrine was then the Doctor's hobby. He carried his theory so far, that he conceived it possible that the Cæsarean section might be performed with safety, if done under water. But still, by those instances, you see how he meant to argue

against the practice of opening the sac of a hernia.

I was about to read another case, but that will bring up other questions, and questions of great importance; I will therefore defer it till I next have the pleasure of seeing you.

MEDICO-CHIRURGICAL SOCIETY.

Tuesday, March 11, 1834.

Among the changes adopted at the late annual election of the officers of this society, we observe that Dr. Clendinning has been appointed one of the secretaries, *vice* Dr. Robert Lee, resigned.

The business of the evening consisted in the reading of a paper from the pen of Dr. Marshall Hall,—*On a New and Simple Mode of Operation for Nævus*,—which was followed by a short discussion. The substance of the paper was given in this journal, by Dr. Hall himself, some time ago*. The practice recommended, it may be remembered, consists in introducing a *couching needle*, with cutting edges, several times through the nævus, with a view to produce a certain degree of adhesive inflammation. Some general remarks on other modes of treatment were contained in the paper; and some cases illustrative of the efficacy of the method proposed were appended.

Mr. Lloyd conceived that the method suggested by Dr. Hall was only adapted to small nævi, where almost any thing producing irritation would answer the purpose; but he (Mr. L.) had seen puncture, injection, caustic, and other energetic methods, fail in the treatment of large nævi.

Mr. Stanley observed, that Dr. Hall had omitted to notice the great variety that there are of those nævi, and the actual structure of which can scarcely be predicated from their outward appearance. He conceived, therefore, that surgeons had a discretion to exercise in the proper treatment to be adopted. Mr. S. subsequently observed, in reply to a question from Mr. Partridge, that he had examined some nævi which had been removed by the knife, and he was always surprised at the extraordinary diminution undergone in bulk when the blood was let out; and dissection of them only shewed a sort of reticulated structure, which could scarcely be said to consist of cells.

Dr. Locock confessed he was disappointed in Dr. Hall's paper. All modes except his own had been condemned by the author; yet he, Dr. L., thought that in some of the cases adduced, the cure was not owing to the needles, but had occurred spontaneously; and he cited a curious instance of spontaneous cure of nævus of the nates of an infant, where ulceration began at the anus. The morbid structures disappear rapidly when once they begin to do so. The mode of employing the pock of vaccination for their removal he deemed commendable; but of course it was not always applicable. He had heard of a nævus removed by the production of a pustule, caused by the insertion of a small crystal of tartar emetic within the nævus: this had been done by Mr. Walker, of St. George's.

Mr. Lloyd said he had frequently tried tartar emetic externally, without success; and he observed, that Dr. Hall had omitted to notice nitric acid among the remedies, a substance which was known to be very effectual in curing small nævi.

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* See our 7th volume, p. 677; also vol. ix. p. 353.

ROYAL INSTITUTION.

Friday, Feb. 21, 1834.

Dr. Grant gave a lecture *On the Nervous System in the Lower Animals*. He began with the lowest part of the scale of animal creation—with those creatures, in fact, which have been supposed destitute of nerves, or nervous matter, but in which the existence of a nervous organization must be admitted as proved by the vital phenomena. With the aid of an abundant supply of drawings—superabundant, we might say, for the very reference to them, in the order required for illustrating the subject of the lecture, occupied almost the whole of the time—the lecturer took a rapid survey of the successive stages of development displayed in the various orders of animals; and amused his audience, when he came to the human being, by informing them that at one period of fœtal life, the brain of the future man is that of a tadpole, at another that of a fish, and subsequently that of a crocodile. It was much to be regretted that the materials of the lecture on this occasion were so crowded and so ill-arranged; an unprofessional audience could only be mystified by the rapidity with which matters of so much interest were brought before them like fleeting shadows. We should not make this remark, but that we could not shut our ears to the complaints so liberally expressed around us; and perhaps the lecturer may not be dissatisfied with a hint of what will

contribute to render his next display more acceptable to a general auditory.

Friday, Feb. 28.

The subject of this evening's lecture was the *Gas-lighting of the Metropolis*, on which Mr. Brande treated with his usual ability. He gave an account of the various products arising in the manufacture of gas; explained the principal contrivances by which the amount of labour of the workmen is ascertained, and by which the quantities of gas produced and consumed are accurately registered; and, in conclusion, he stated numerous interesting details relative to the mode of diffusing the gas through the town, and the prodigious number of burners which are employed in the streets and houses.

MOSCATI'S DEVELOPMENTS.

The members of the Phrenological Society must really be proud of the figure which "the Marquis" has recently made —that distinguished "person" who contributed so largely not long since to embellish their *scientific* soirées. There he used to flourish with his shaven crown, that all might see and admire the extraordinary developments on his wonderful head! Alas! for the cause of phrenology, that no one—not even the famed gauger of other men's brains in the Strand—should have detected any of those powers and faculties of *invention* which the *Times* has, within these few days, so successfully brought to light! Alas! too, for the sagacity of a contemporary, who, though he was a match for Chabert, the fire-eater, yet could not resist the temptation of swallowing Moscati's skull, bumps and all! Truly, phrenology is a deep and wonderful science!

LITERARY ANNOUNCEMENT.

We are requested to notice a forthcoming edition of the Works of John Hunter, by J. F. Palmer, Senior Surgeon to the St. George's and St. James's Dispensary; assisted by Mr. Babington, of St. George's Hospital, Mr. T. Bell, Mr. R. Owen, and Dr. Robert Lee. We are informed that the Royal Society have, with great liberality, granted the use of the whole of their copper-plate engravings connected with Mr. Hunter's papers in the Philosophical Transactions, for the purpose of enabling the Editor to complete the series of plates designed for the illustration of this edition.

NEW MEDICAL WORKS.

Outlines of the Anatomy and Physiology of the Teeth, &c.; with Practical Observations on Artificial Teeth. By David Wemyss Jobson, 8vo. 12s. bds.

PREPARING FOR PUBLICATION.

Pathological and Surgical Observations on the Diseases of the Joints. By B. C. Brodie, Esq., V.P.R.S. Third edition, revised, altered, and enlarged. *Nearly ready.*

Elements of Medical Police; or, the Principles and Practice of Legislating for the Public Health. By Bisset Hawkins, M.D. 1 vol. 8vo.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *March* 11, 1834.

Abscess	2	Hooping-Cough	3
Age and Debility	38	Inflammation	23
Apoplexy	9	Bowels & Stomach	6
Asthma	23	Brain	11
Cancer	2	Lungs and Pleura	8
Childbirth	1	Insanity	2
Consumption	57	Jaundice	2
Constipation of the Bowels	2	Liver, diseased	6
Convulsions	25	Measles	4
Croup	2	Mortification	6
Dentition or Teething	9	Paralysis	6
Dropsy	9	Rheumatism	1
Dropsy on the Brain	10	Small-Pox	1
Dropsy on the Chest	1	Sore Throat and Quinsey	1
Fever	10	Thrush	1
Fever, Scarlet	7	Unknown Causes	2
Gout	1		
Hæmorrhage	1	Stillborn	23
Heart, diseased	1		

Decrease of Burials, as compared with the preceding week . . . 288

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Mar. 1834.	THERMOMETER.	BAROMETER.
Thursday . 6	from 42 to 50	29·47 to 29·61
Friday . . 7	36 54	30 06 30·25
Saturday . 8	40 55	30·29 30·31
Sunday . . 9	40 55	30·32 30·34
Monday . . 10	41 56	30·37 30·40
Tuesday . . 11	40 57	30·41 30·42
Wednesday 12	31 53	30·42 30·35

Wind variable, S.W. prevailing.

Rain at times on the 7th and 12th; otherwise, generally clear.

Rain fallen, ·125 of an inch.

CHARLES HENRY ADAMS.

NOTICE.

Mr. Robarts's paper shall appear, if possible, in our next number.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 22, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XXIV.

LABOUR.

DUTIES OF THE MEDICAL ATTENDANT UNDER NATURAL LABOUR.

Importance of ascertaining the presentation early in the labour.—It next becomes our duty to ascertain what part of the child presents; and this knowledge it is highly desirable for us to gain, if possible, before the membranes rupture. The *necessity*, indeed, of determining the presentation *so early* in the process, is denied by many obstetricians, and, among others, by one eminent authority in this town.

With such a dangerous sentiment I can by no means coincide; considering it imperative on every practitioner—provided the labour has made any progress—not to leave the patient's room until he has perfectly satisfied himself that it is the head which offers at the brim: for as occasionally transverse presentations occur—as, under such a malposition, it requires that a change in the situation of the fœtus should be artificially made before the birth can be perfected—and as that change is comparatively an easy operation previously to the bursting of the membranes, but is rendered one of the most difficult in surgery, if much time is allowed to escape after the evacuation of the liquor amnii—so it necessarily follows that the advocates of such a doctrine run the risk of lulling their disciples into a perilous and fatal security. It is certainly not always an easy matter to distinguish the presenting part at the onset of labour, by the first finger of the *right* hand—the mode of examination previously recommended—because, occasionally, it lies too high for detection in that manner: but it is seldom that some part of the child's body cannot be felt, if two fingers of the *left* hand be introduced into the vagina; since they will almost always command the whole cavity of the pelvis, and may be passed up to the very brim. Whenever, then, any doubt arises as to the position of the fœtus, it is much better to have recourse to this second expedient than to remain in ignorance of so material a point. For my own part, in practice I follow up this rule to the uttermost; and never rest satisfied until I have accomplished my object by one of these two modes of examination.

Discriminating marks of a head presentation.—The head is distinguishable by its large volume, its roundness and firmness, and by its constituent bones being intersected and separated from each other by open lines and spaces: for it is seldom, when the os uteri is dilated to the size of half a crown or a dollar, that we cannot detect some portion of a fontanelle, or one of the sutures. There is little chance of any other presentation being mistaken for the head, except the breech, and perhaps (as I have known happen) the side. The breech is most likely to be confounded with the cranium, because it possesses a larger circumference than any other part of the child's body, except the head; but it still differs from the head materially in its general size, and more particularly in feeling to the finger softer—not so resistant, but more *cushiony*: it is also more pointed, and possesses no structure resembling a suture or fontanelle. The principal discriminating marks of the breech, however—of which we shall speak more at length hereafter—are the anus and genitals. The only point of structure in the side which bears the least shadow of resemblance to the head, consists in the interosseous spaces between

the ribs; one of which might possibly be mistaken for a cranial suture. If it were worth while drawing distinctive marks between these two parts, I might observe, that at the commencement of labour under a side presentation, the body of the fœtus seldom descends upon the brim, or into the pelvic cavity, so readily as when the head offers itself; the shoulder and breech being then supported by, and resting upon, the respective ilia. It is, therefore, generally quite out of the reach of the finger, until after the membranes have broken; and this of itself would be a suspicious circumstance. Secondly, the space between the ribs is wider than any suture of the head—unless, indeed, the fœtus be hydrocephalic; and, thirdly, we may usually detect more than one interosseous vacancy. Now as there are no two sutures in the cranium that run in parallel lines, if we can trace more than one such space by the finger, we can be at no loss to determine that they are both intercostal.

Having ascertained by the marks enumerated that the head presents, let us be contented with this information; it is by no means necessary, or desirable, at present, that we should perplex ourselves with endeavouring to make out the nice distinctions between the different parts of the head, so as to say exactly whether the face is directed to one side or the other; or whether the vertex presents, or any other point. It is sufficient that we have assured ourselves the head is at the brim; and we may take it for granted the vertex offers, unless, indeed, we can clearly distinguish the anterior fontanelle. In that case, we know the brow is the most depending part, and we may think it right, by counter-pressure, to attempt an alteration in the position of the head,—in the manner that will shortly be more particularly described,—before it has engaged in the pelvic cavity. And this recommendation is not given to impress you with the idea that it is enough to make a careless examination, but to prevent your doing harm by your attempts to distinguish such a difficult matter—harm by irritating the vagina and os uteri—harm especially by prematurely rupturing the membranes, which it is highly necessary for us to preserve whole: for in irritable habits we shall often find that the simple introduction of the finger is sufficient to cause an accession of uterine pain; and if—only intent on ascertaining how the head is situated, without reference to the preservation of the bag—we carry our finger round, within the os uteri, we shall most likely induce action; and the membranes will be more or less suddenly protruded against its extremity. The finger then passes into the centre of the aqueous cyst, out flows the liquor amnii, and irreparable mischief is done. Let us then—if we have clearly distinguished the head over the os uteri—presume that it is placed in the most favourable position for its descent into the cavity of the pelvis, until after the membranes have given way:—we may then proceed to examine the presenting part more accurately, and, provided the labour does not progress favourably and satisfactorily, it behoves us, in all cases, to be most particular in our inquiries as to whether the delay be owing to the malposition of the head; or to some other of the many and various causes that may retard its advance.

Information sought of the obstetrician after the first examination.—After the first examination has been made, the patient herself, and her friends, are always anxious to learn from the medical attendant if all be natural and satisfactory, and how long is likely to elapse before the labour will be terminated. With regard to the first question, if we have gained all the information which I require we should do, we may give a decided answer; but the second must be evaded. If we find the vagina distensible, the os uteri dilated, the head presenting, and the pains sufficiently active; we may reply, with a positive assurance, that so far every thing is favourable; that no case can afford a more auspicious promise than the one under our care; and that, therefore, we are warranted in anticipating a fortunate result: to the second question, let us not attempt to reply. Let us take it for granted, after such a positive declaration of good tidings, that *it* will not be repeated; and, as society is at present constituted, whoever obtains a plain, straightforward answer to one out of two questions, ought to consider himself fairly dealt with. But if the party we are addressing thinks differently,—which we shall most usually find the case,—and presses the subject again on our attention, let us tell them plainly, they ought to remain content with the honest declaration we have given, that the case is progressing as favourably as possible; that it is out of the scope of human knowledge, and consequently quite out of the the power of any human being, to say positively when the labour will be terminated. Any opinion we might form would be but a guess at the best; and it is not fit that we should trust an answer, which may involve such serious disappointment, to conjecture. If we were to make a promise, that the labour would be brought to a termination either at noon or midnight, or any other specified moment, we may be disappointed in two ways. It is very unlikely that it should end just at the period of time we have mentioned; it might be earlier, and then an inference might be drawn, that we knew nothing about the

case: but it is also probable, that the time fixed upon will pass by, without our promise being fulfilled; it will then act most injuriously on the patient's mind: she loses confidence,—that loss of confidence is attended with dejection,—the nervous system is depressed,—and the process of labour is more or less interfered with. By making promises of this kind, then, we may be the means of producing a lingering, painful, dangerous, an instrumental, and perhaps a fatal case. Upon such trifles, sometimes, does the welfare of our patient depend!

Frequent examinations must not be made.—Frequent examinations should not be made during the first stage of labour. We can do no good by such a practice, after we have once gained the information we require: we cannot assist the patient; we cannot facilitate the birth of the child; we cannot dilate the parts; but we may do a great deal of injury; for we denude the vagina of that soft relaxing mucus which is designed by nature to protect it, and we run the risk of destroying the integrity of the membranous cyst: we may, therefore, predispose the parts to inflammation, and retard the dilatation of the os uteri itself. As, however, it is a common idea among women, that, under each examination, material assistance is rendered, we shall frequently be urged, during the first stage, —especially if the labour be rather slower than usual,—to remain in close attendance on the patient's person. Should this be the case, the finger may be introduced from time to time, with the greatest care and gentleness; more to pacify the patient's mind, and assure her she is not neglected, than with any other view beyond that of merely watching the progress of dilatation. The more rigid the parts are, the more do they require the softening influence of the natural secretion, and the more careful must we be to preserve it.

Impropriety of remaining in the patient's room, or returning home.—A question naturally arises, whether we shall remain in the patient's bed-room, or may with safety return home. It is not right that we should stay in the same chamber with the patient, during the first stage; because, as I before mentioned, there is a frequent inclination to pass urine and fæces; and she will be compelled to restrain that desire, as she will probably not like to be constantly requesting her medical attendant to retire. It is not necessary for us to remain with her; all that is required being, that we should overlook the process, and be at hand to act on any emergency occurring. Let us retire, then, from the room, and direct the nurse to inform us, if the pains become stronger, and particularly if the membranes rupture. In about an hour—should we receive no summons in the meantime—we may see her again, and may then, if we think it right, make another examination, to ascertain that the labour is proceeding satisfactorily. But, if it is not necessary for us to remain in the chamber, or by the bed-side, is it desirable for us to return home? In this question, the comfort and convenience of the medical attendant are much interested; and its answer must depend, in a great measure, on circumstances;—such as, whether it is a first or subsequent labour; whether the previous labours have been quick or lingering; how far the os uteri is dilated or dilatable, and particularly the distance of her residence. If it should not be above a few minutes' walk from one house to the other, it is not necessary that we should remain at the commencement of labour; but if the distance be great,—especially if the patient have had children before, and her labours have been quick,—even should the os uteri not be dilated more than to admit the point of one finger; provided the pains are following each other rapidly, it is better not to leave the house. As a general principle, I would say, that in all cases, as soon as the os uteri has acquired the diameter of half-a-crown, sufficiently large to admit the points of four fingers just within its disc, it is scarcely safe to be absent from the house for more than a quarter of an hour or twenty minutes at a time; because, although it may have taken five or six hours to dilate from a close state to the diameter of half-a-crown, the subsequent process of dilatation may go on so rapidly, that a few more pains may accomplish it, and the child may be expelled before we can arrive.

Some practitioners, (of whom Dr. Hamilton, of Edinburgh, is one,) recommend, that, although our presence is not required in the lying-in chamber, still we should not occupy ourselves in any employment or amusement, while we remain in attendance. They argue, that, inasmuch as we receive a consideration for our time and service, our whole mind should be entirely devoted to the patient's state, and in suggestions for her comfort. With this sentiment I entirely disagree. I grant that we ought to afford every necessary and proper attention, whether the patient remunerates us or not; but, in common cases, such an entire devotion of our mental faculties is not required; and we may produce a hurtful impression by our apparent anxiety. It is natural for a man, who is not of an indolent disposition, but whose mind is usually directed to some object, to become *fidgetty*, if his attention be not occupied by any pursuit; he will, perhaps, be pacing the drawing-room, where the husband is sitting; he will be looking first out of one window, and then out of another; first sitting on one chair, and then another;

first putting his hand into one poeket, and then into another; and he is, by this mere absence of manner, giving the husband an idea that he is more than ordinarily anxious on account of his lady. Such an impression will find its way through the creviee of the door to the lying-in chamber; it will reach the patient herself, and is likely to produce all the disadvantages whieh result from depressed spirits. Let him oceupy himself, then, in some way that best suits his taste, either writing or reading; and there are few books he may chanee to take up but will afford him amusement or instruetion.

Not necessary that the patient should continue in one posture.—With regard to the general management of the patient, it is by no means requisite that she should continue in one posture during the first stage; she may relieve herself by changing her position on the bed, by sitting up, or walking about the room; for she will soon be able neither to sit, stand, nor walk, but will be eompelled to take a definite position on the bed, from which she is not to move till after the termination of the labour.

Nourishment to be taken by the patient.—She may be allowed any bland, fluid nourishment, that she fancies; but it is very little she requires. We sometimes hear it said —especially in that rank of soeiety which may be considered the third and fourth grades — "she must be very faint, poor creature; here is the middle of the day, and she has taken no breakfast;" or, perhaps, "her breakfast was brought up again; I dare say you will let her eat a mutton ehop, Doetor?" Certainly not; digestion does not go on under the process of labour with suffieient energy, to assimilate solid animal food. A little beef-tea may be taken; but farinaceous preparations, or tea, or eoffee, are mueh better; and we shall generally find that, inasmuch as the digestive process is almost suspended, or at any rate rendered very torpid, under labour, so there is very little desire for nourishment; and what is swallowed beyond the simplest fluids, is more in compliance with the entreaties of her officious friends, than from any appetite or inclination of her own.

DUTIES DURING THE SECOND STAGE.

The seeond stage of labour having commeneed, we are summoned to the patient's bed-room, and told that the membranes are ruptured. She is very likely found reclining on the bed, and probably the pains are more urgent than they were before, or perhaps they are somewhat suspended. We now require to make another examination, because it is possible that the head may have entered the cavity, and may be soon expelled. Finding the head low in the pelvis—finding the os uteri almost entirely dilated, the membranes broken, and the pains strong, and coming on frequently, it is right not to leave the patient's room; but unless the perineum be somewhat on the stretch, it is not neeessary for us yet to take our post exaetly by the bed-side.

When, however, the head has eome to press upon the external parts,—particularly when it has made its turn, and is beginning to extend the structures at the outlet of the pelvis, it beeomes then our duty to take our seat by the bed-side, and never to move from our position till the ehild has passed. This we do for the purpose of supporting the perineum, in order to prevent laeeration.

Mode of supporting the perineum. — The mode we take for affording the necessary protection is the following. We sit rather behind the patient than before her, and apply the palm of the left hand—guarded for the sake of delicacy, eleanliness, and eonvenience, with a soft napkin—steadily and firmly against the perineal tumor.

The kind of support we use, is not a foreible pressure; it is not a strenuous exertion that we make, but a passive support, that we afford. Plaeing our elbow on the bedstead, we render it a fixed point, and rather allow the head, eovered by the thinned struetures, to be protruded against our hand, than foreibly press our hand up against the head. This part of the duty of the obstetrical attendant is sometimes exceedingly irksome and fatiguing. Occasionally it will be found necessary for us to remain three or four hours by the side of the patient, without moving from our seat. I have sometimes thought it not safe to remove my hand for more than a minute or two together, during the whole of that time; and I recollect hearing Dr. Hamilton say, that he was on one oeeasion thirteen hours by his patient's bed-side, proteeting the endangered structures. It is not to be wondered at that, under such an irksome posture, the hand should become numbed, and the whole person cramped; but we must put our personal ineonvenience quite out of the aceount, when weighed against our patient's safety; and we must recollect, that the more rigid the parts are, the longer time they take in dilating, the more our assistance is neeessary. We must not permit any length of time that we may have been so fatiguingly occupied, to rise as an excuse for our relaxing in this duty, but always bear in mind, that if the uterus act strongly, and the head be protruded suddenly, while the parts have not the advantage of the support we can afford, there is great danger that sueh a degree of laceration will oceur, as perhaps to render the patient miserable for the rest of her existence.

Some practitioners recommend that we should use the bare hand, because, they say, we can then most perfectly ascertain where the perineum is thinnest, where it is most likely to give way, and consequently where it requires our chief attention. We can ascertain this point through the fold of a napkin quite as well as with the naked palm; it is most likely to give way at the fourchette first, if inclined to lacerate at all; but should any other part be the thinnest, and most in danger, we, nevertheless, can easily detect it.

Others, again, recommend that, sitting directly behind the patient, we should support the perineum with the palm of the right hand, while with the fingers of the same hand we make our observations on the descent of the head, which gives us the advantage of leaving the left hand and arm perfectly unemployed. This posture is very inconvenient, because we cannot well sit sufficiently behind the patient to use the hand with freedom and advantage; nor can we, in that manner, so readily ascertain the progress which the head is making.

Some, moreover, think it best that we should give no support to the maternal structures at all, but make steady pressure against the child's head each time it is propelled forwards, so as to retard its exit until the external parts are sufficiently dilatable to permit its passage without injury. And others still—more speculative than practical men—deny that any attention is necessary; they even declare it to be injurious. We often hear it objected, that laceration of the perineum takes place under the assistance of a medical man more frequently than it does when patients are delivered without that assistance. I am willing to confess, that with the advantage of the most judicious management, and the greatest care, such a laceration will occasionally occur; but that the event is rare, I am, from my own observations, quite persuaded. Under instrumental delivery it is, perhaps, not so uncommon; but under natural labour it is certainly very seldom met with. If, however, the fact be as stated, we may account for it in two ways. In the first place, when a child is expelled very rapidly, before medical assistance can be procured, it stands to reason that the soft structures must have been very lax, else they would have resisted the sudden passage of the fœtus, and the labour would have been more tardy; and the more lax the parts are, the more easily are they distended, and the less danger is there of their being torn. Again, women, when the child is likely to be born in the absence of the medical practitioner, refrain from making any voluntary efforts; and consequently the parts are more perfectly prepared for the child's exit, and laceration is less likely to occur. The knowledge of this fact would teach us to caution our patient in the strongest manner against using her own voluntary efforts, if there be the slightest rigidity: she cannot altogether prevent holding in her breath, and making some forcible exertions; but she should be directed and implored not to call the abdominal muscles and diaphragm into stronger action than she can possibly avoid. Among the attendants in the lying-in room, it is too much the custom to urge the woman, immediately that the pains of labour come on, to make use of all her voluntary powers, with the expectation that such efforts will produce a more speedy termination to the labour. The practice is most injurious, and should be reprobated in the strongest manner. In the first stage of labour, before the os uteri is dilated, this straining can be of no avail; it cannot further in the least the progress of dilatation, and tends only to wear the strength out prematurely. When the os uteri is entirely opened, indeed, and the expulsive pains are urgent, the auxiliary muscles much assist the birth; but even then it is desirable that she should not use great voluntary effort, for the reasons I have just given you.

By some, again, we are directed, as soon as the anterior fontanelle appears at the edge of the fourchette, to slip the perineum back over the face, by the extremities of two or three fingers pressed against it; that the tension of the parts may be more speedily relieved. I cannot conceive any practice more likely to occasion the very accident which it should be our studious anxiety to prevent.

Most women remain tolerably quiet, in one position, during the second stage of labour; but some are exceedingly irritable, tossing about in all directions, will not be advised, and can scarcely be restrained. It is our duty by all the means in our power, both of persuasion and gentle force, to prevent such a patient injuring herself by suddenly starting away from our assistance: for many cases have happened where a rupture of the perineum, under such circumstances, has occurred, to a frightful extent; and we may generally succeed by a little management. I have already mentioned, that the thighs must be drawn up towards the abdomen, and the legs bent a little back upon the thighs, the whole person lying on the left side; and the patient is usually placed so that her feet may rest against the bed-post; and in this way they become a fixed point, and keep the pelvis steady. We render the shoulders, also, another fixed point, so as to steady the upper part of the body, by tying a long napkin, or, what is preferable,

a round towel, to the same bed-post, and desiring her to hold it in her hand. We tell her, when a pain comes on, to press with her feet against the bed-post, and pull gently at the towel, cautioning her against straining violently. The consequence is, she so fixes her person, that it is almost impossible for her to jump away suddenly, or recede to any distance from us. Independently of this little manœuvring — when the head is in any degree extending the vulva — the nurse must be required to raise the right knee to some distance from the other, by which means the thighs are separated, and an increased facility given to the exit of the head through the external parts, as well as some control exercised over the patient's movements. It is very possible that the nurse (cunning enough to know the length of time she may perhaps be required to remain at her post), may wish to substitute a pillow for her own services, and persuade you it will do equally as well. For four reasons the pillow must be objected to: it increases the heat of the patient's person, already, perhaps, profusely perspiring; it does not afford a support sufficient to prevent the legs from being squeezed together; in the acmè of pain it will often slip away from between the knees, and we lose its advantage just when we require it the most; and, lastly, it can be of no service in restraining the woman in one posture. By such management, then,— which is useful more or less on all occasions,—we prevent an irritable patient jumping away from our support, and often preserve her from injury.

Dr. Denman tells us, that the greatest degree of laceration which ever occurred to him was occasioned by the patient suddenly withdrawing herself out of his reach, and beyond the possibility of his giving any support to the part, at the instant the head was passing over the perineum.

This justly-celebrated physician, and highly benevolent man, has also noticed it as very remarkable, that none of the ancient writers advise any method by which this accident may be prevented, or any means to be used for its relief, excepting such as were generally recommended for inflamed, ulcerated, or fistulous parts. He states, indeed, that it is mentioned by Eros, who lived in the thirteenth century; and an awkward method of preventing it recommended. He draws the inference, that this silence must either have arisen from its being rarely met with, or from its being thought of little consequence when it did happen; and he seems to incline to the latter opinion, on the grounds, that the older writers on midwifery lived in countries where polygamy was permitted, and where the death or infirmity of one wife was of little importance to him who had many. But since the wide diffusion of the benign spirit of Christianity, one wife only being allowed to one man, any disease or infirmity which might render her person less agreeable to him, must become of infinite consequence to their mutual happiness; and that therefore the attention of scientific men was directed to the subject.

This explanation is exceedingly ingenious, and may be in a great part true; but I am inclined to think that the women themselves were less predisposed to this accident, partly from natural constitution, partly from the relaxing influence of the warm climate in which they resided, and partly — and perhaps principally — from their beginning to bear children earlier in life than is usual among the civilized nations of the present day: and it cannot be disputed that our late marriages are so far a departure from the intentions and ordinances of nature.

The extent of this accident varies much in degree, from a simple laceration of one or two fibres at the anterior edge of the perineum to a rupture of the whole organ, the destruction of the sphincter ani, and the conversion of the two canals, the vagina and rectum, into one common cavity. The rent generally commences at the fourchette: at other times it will begin in some portion of the inner membrane of the vagina, and extend anteriorly to the edge of the perineum, when it will be again continued back to the point corresponding with the origin of the laceration within, or will even pass beyond it; and more rarely the head is protruded through the substance of the perineum itself, forming a fresh aperture, by which it escapes, leaving the fourchette entire. Of this latter variety I have only seen one instance; and on that case my opinion was requested in consultation, a few days after the labour. It was evident there, that the child had not passed through the vulva, but through an adventitious opening, and the attendant was perfectly aware of that circumstance at the time.

Professor Burns asserts, that "in every case the fourchette and a small part of the posterior surface of the vagina are lacerated, though the integuments of the perineum remain sound." To this opinion I can by no means subscribe. I know that a deceptive appearance of lacerated surface often presents itself, in consequence of a small fold of the relaxed internal membrane of the vagina falling down over the edge of the perineum after delivery; which I have also seen mistaken for a slight rent, from its florid, vermilion hue; and it is not impossible that this cause of deception may frequently occur. At the same time I have no doubt that in many cases a trivial laceration takes place, which is

never either known to the patient, or suspected by her attendant.

Protrusion of the head.—Varying much in time, varying much in the intensity of agony which is suffered, and in the number of pains that occur, the head is at last protruded, in the manner before noticed. It is most likely the child may attempt to gasp the moment the head is expelled; and on this account it is right to wipe its face immediately with a clean napkin (of which necessary articles we always require to have a store close at hand, upon the bed), lest in the first inspiration some of the mucus which may hang about its lips, or other moisture, should be inhaled.

Coiling of the funis around the neck.—I have already mentioned, that some little time usually elapses between the expulsion of the head and the pain that is to expel the shoulders; and this interval may be usefully employed, after the face is cleaned, in making an examination of the neck, to ascertain whether a fold of funis may not possibly be surrounding it. It frequently happens that there is one; sometimes there are two, and occasionally three or four folds of the navel-string coiled around the neck; and if it were not liberated, it is very possible that the pain which expels the shoulders might cause the placenta to be dragged away from its attachment, to the great peril of the mother, from hæmorrhage, or perhaps from inversion of the uterus. But the chief danger is to the infant. If on its expulsion the cord be drawn tightly around its neck, the circulation through the funis will be arrested by the compression of the vessels, and the same compression may also close the trachea to such an extent, as to prevent the reception of air into the lungs. Thus the double source of life being cut off at the same time, strangulation must be a necessary consequence. I was once witness to the death of an infant under such circumstances. When I arrived at the patient's house, I found the child lying dead near the external parts of the mother. The funis umbilicalis was twice coiled round the neck, and the child had been deprived of the advantage of the placental circulation, and of the power of breathing at the same time, and by the same means. There was a deep livid ring encircling the throat, produced by the pressure the funis had caused; and it was evident from this mark that the infant was alive at the moment of its birth. It is a most interesting and instructive case, not only obstetrically and physiologically, but particularly with respect to forensic medicine. If this birth had taken place under suspicious circumstances, the mother not being a married woman, it is very possible that a charge of murder might have been founded on the appearance of the mark round the neck; as it could not be distinguished from the effects of a cord, applied with the intention of destroying life.

The best way to free the funis from this awkward situation is by drawing down the loop, and passing it over the child's head, by which means we liberate it entirely, and it is no longer an impediment to the expulsion of the shoulders. But it occasionally happens,—especially if the funis be more than once coiled round the neck,—that it is not sufficiently long to allow its being pulled over the head: we may then keep the loop distended with our fingers, until the shoulders are expelled, and they must be allowed to slip through it. This is almost as easily carried into effect, in all cases, as drawing the funis over the head; but of the two methods I prefer the first.

I am inclined to think that we shall not frequently find the funis twisted round the neck of the child in the uterus; but that it is produced by the cord gravitating to the neck of the womb in a coil, and by the head of the child slipping through it as it is expelled; because in all the dissections that I have made, I have never found the funis encircling the child's neck in the way it is so frequently met with under labour.

Directly the head is born, it is usual with some one of the attendants to offer to the medical practitioner a close flannel cap for the infant, which he is expected to apply as soon as a convenient opportunity occurs; and this is done under the idea that, of all parts of the body, the head is most susceptible of the action of cold. As far as I know there is no good ground for this assumption; but inasmuch as the custom is dictated by a very universal prejudice, it is as well to give way to it, unless other more important duties require immediate attention: for should this very necessary precaution, as it is supposed, be omitted, and the profferred means of protection be rejected with indifference or scorn, it is more than probable that any little ailments the child may be subject to during the first few weeks of its extra-uterine existence, will be attributed to the neglect shewn in this particular.

Support of the perineum during the expulsion of the body.—Although the shoulders of the child take up less room than the head, and although the parts, having been previously distended by the passage of the larger substance, generally easily admit the shoulders —provided the child be of normal shape— still it is desirable that some support should also be afforded to the perineum while the body is passing, even after the head has made its exit. Having wiped the face, then, invested the skull with the cap, and made an examination to ascer-

tain that the funis is not twisted around the neck, we may again place the left hand on the perineum, while we direct the fœtal body rather forwards,—in correspondence with the axis of the pelvic outlet,—and receive it with the right.

Rapid extraction of the child, after the exit of the head, improper.—I must here caution you strongly against extracting the child rapidly after the head is born. It used to be the practice, and is still continued by some obstetricians, to surround the neck with the thumbs and fingers of both hands, and forcibly extract the body the moment the head is in the world, for the purpose of liberating the woman from pain, and terminating the delivery as speedily as possible. Such practice is attended with double danger: great chance of injury to the child, by the tension of the neck; and no small probability of hazard to the mother, by the uterus being prematurely emptied. It is thus left in a flaccid state; the stimulus which previously disposed it to contract is suddenly taken away; that disposition ceases, or is suspended; hæmorrhage is induced; a necessity probably arises for the artificial removal of the placenta; and incalculable mischief is the consequence. Those persons who commend such meddling interference, and who estimate the skill of the obstetrical attendant by the rapidity with which he can extract the body after the head is born, base their opinion on most dangerous grounds.

When the shoulders have passed, the parts require no further protection; the breech and legs are usually soon expelled, with slight suffering and little hazard to the maternal structures.

The child, then, being entirely in the world, it must be slowly removed a little distance from the mother's body, not more than to the extent of four or five inches, and withdrawn from beneath the bedclothes, the woman's person being still left perfectly covered and concealed. I have already shewn you that the funis umbilicalis varies exceedingly in length, and that sometimes its measure has been known not to exceed half a foot. Now, should the cord be unusually short, and should we hastily draw away the infant to some extent, we shall "make a pluck" at the placenta; and we run the risk of tearing it away from its attachment, or, perhaps, of even inverting the uterus. If we find the cord sufficiently long to permit the further removal of the child's body, we may place it more completely under our command, before we proceed to secure the vessels and separate it; the mode of doing which I shall describe at the commencement of the next lecture.

AN ESSAY

ON MEDICAL REFORM.

By Dr. Barlow, of Bath.

[Concluded from p. 905.]

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3. *Adaptation of the Remedial Arrangement.*

We now approach the point which can alone give any interest to the foregoing discussion, namely, the practical measures which the present exigency requires, and by which real amendment of the profession can be effected; and it is presumed that we enter on its consideration with clearer views, from the several expositions given in the foregoing pages.

The question to be solved is, how can a just and suitable organization of the profession be adapted to the present state of its institutions, so as to introduce effectually all necessary reforms, without injury to the good which these institutions, with all their imperfections, unquestionably comprise? It may suit declaimers to deny that any good attaches to them, but the well-judging part of the profession will pause ere it accept such assertion for proofs, and will look more deeply ere it sacrifice, at the shrine of reckless presumption, those demonstrable benefits which these institutions have conferred, and which the literature, science, and liberal cultivation of the higher classes of the profession, derived from these institutions, must, as they have heretofore done, ever impart to it.

We proceed, then, to consider, in this final section—1, How the state of the profession actually existent has arisen; 2, What are the errors and defects to which its acknowledged inefficiency is ascribable; and, 3, By what specific measures can the legislature now interpose to give the profession a legal organization, suited to the advanced state of medical science, and calculated to promote both the well-being and harmony of the profession, and the best interests of the community.

1. The profession, as now constituted by law, consists of three departments, namely, physicians, surgeons, and general practitioners, each department having a corporation specially allotted for its superintendence. In order to understand clearly the nature and functions of these corporate bodies, it is necessary to review respectively their origin and pro-

gress, so as to mark how far they are capable of fulfilling the ends of their institution, and in what respects they fail.

Physicians.—The first act of the legislature relative to physicians that is worthy of notice, is the 3 H. VIII. c. 11, which prohibited the practice of physic or surgery within the City of London, or within seven miles of the same, except by such as were admitted by the Bishop of London, or by the Dean of St. Paul's, after due examination, a penalty being annexed to unauthorized practice. This statute is unrepealed; it was passed in in 1511.

In 1518, a charter was granted by Henry VIII., by which the present College of Physicians of London was constituted; and in 1522 this charter was confirmed by statute, namely, the 14 and 15 H. VIII. c. 5.

In 1540 a supplementary act was passed (32 H. VIII. c. 40), conferring additional privileges, and ordaining some slight changes.

One more act relative to this College was passed in a later reign, namely 1 Mary, Sess. 2. c. 9. (1553), by which the previous charter and statutes were confirmed and enlarged.

The provisions of these several instruments are too well known to need a particular account of them in this place: all who wish to examine them may see them conveniently collected in Willcock's Exposition of the Laws of the Medical Profession, published in 1830. It is enough here to remark, that they afford, either in the letter or the spirit of their provisions, but little sanction to the course of procedures which the College of Physicians have undeviatingly pursued from that period to the present time. Other royal charters have been granted to this College subsequently—by Eliz. in 1565; by James I. in 1618; and by Charles II. in 1663; but they are deserving of little notice, for never having received legal confirmation, they cannot supersede the law as established by the statutes of Henry and Mary.

The object of the original charter, and its confirming statutes, obviously was to incorporate in one association all members of the same faculty who should prove their qualifications in the way prescribed—all such being by their admission entitled to equal rights and privileges. The College, however, thought proper to view their powers in a different light, and, through successive by-laws, wholly incompatible with the statutes, inasmuch as they directly abrogate rights conferred by the statutes, they have narrowed the College, so as to limit its powers to a small body of Fellows, the more numerous and equally competent Licentiates being suffered to exercise no rights as members of the body corporate, and only receiving permission to practise their art on payment to the College of heavy fees.

Some account of how this body has executed the trust confided to it may be seen in a paper published in the sixteenth volume of the Edinburgh Medical and Surgical Journal. The subject is too copious to allow of its being dwelt on here, and the usurpations of the College are now far better known than they were when the paper referred to was written.

What appears most extraordinary in contemplating the date of the charter and statutes, the vast advance which medical science has since made, the improvement of medical education, and the great changes that have occurred both in the profession and in society, is, that no attempt has been made on the part of this College to amend their statutes, or procure from the legislature an extension of their powers, so as to render these more adequate to the altered and extended functions which it fell within their province to discharge. The supineness manifested is at first view most unaccountable, especially when it is known that the College has long been fully sensible of the inadequacy of its powers. The only explanation the case admits of is, that the College was well aware that in seeking from parliament any extension of its powers, some account must be rendered of the mode in which the previous powers had been exercised, and that conscious that this exercise would not bear a scrutiny, and reluctant to bring into hazard authority so long possessed, they shrunk from examination, and preferred abiding by old and inadequate laws, rather than forego the unauthorized powers which they had been accustomed to exercise. In referring to the procedures of this College, my wish is to dwell on the facts alone, refraining from all imputation of moral culpability on the part of its members. However erroneous or indefensible their measures, they may have been honest in intention. They probably thought that the interests of science

and the profession required them to maintain a high standard of qualification, and that their measures were calculated to attain this end. The principles of political science, too, being, at the institution of this College, very imperfectly understood, its members might not have been aware of the tendency of their measures to defeat their own purpose. This purpose was to keep the profession select; but in pursuing it, they narrowed their body, so as to render its members insufficient for the increasing exigencies of the public, and thus forced into existence a class of unauthorized practitioners, to fill the void left by a too scanty supply of the authorized.

Had the College, abiding by the clear purport of their own charter and statutes, admitted within their pale all physicians that were regularly educated and competently qualified, they would have supplied the public wants, so as to leave little room for those encroachments which the surgeons and general practitioners have so successfully made on the province of the physician.

It is not yet too late to redeem some part of the lost ground, by giving to physicians generally, through appropriate incorporation, such free and equal rights as would promote the efficient exercise of their faculties and acquirements, and thus enable them to sustain the competition which they have to encounter. But if the means of doing so be much longer delayed, the class of physicians will rapidly decline, to the great injury of all that is enlightened or liberal in the profession.

Beset as the physician's department is with disadvantages, men of liberal education and high attainments will cease to enter it, and it is scarcely possible that either surgeons or general practitioners could adequately fill the void which its extinction would leave.

Surgeons.—Respecting the surgeons, it is needless to go farther back than the year 1745, when, by an act of parliament (18 Geo. II. s. 15.), the surgeons were disunited from their colleagues the barbers, and formed into a separate and distinct corporation. In 1800 the present College was founded by royal charter, 40 Geo. III.; and in 1823 a supplementary charter (3 Geo. IV.) gave some further privileges, and altered the denomination of officers from Master, Governors, and Court of Assistants, to President, Vice-Presidents, and Council.

Apothecaries.—In 1616 the apothecaries were first formed into a distinct corporation by charter (13 Jac. 1.), which separated them from the grocers. Until 1815 they were by law only dispensers of medicine; and though extensively engaged both in medical and surgical practice, they were not recognised as practitioners in either until they obtained the act of parliament, 55 Geo. III. c. 194, from which their present powers are derived. These powers are far more complete than those possessed by either of the other chartered bodies, and the extent and efficiency of them are such, as to give to the Apothecaries' Company a legalised predominance, which it would be difficult to vindicate on the ground of any superior capability for discharging the functions which they are require by this statute to exercise. The supineness of both Royal Colleges left the apothecaries free and unopposed in obtaining any powers they desired; and the consequence is, that so far as legal rights are concerned, they may set both at defiance. Their statute empowers them to qualify their licentiates as practitioners in physic, thus superseding the College of Physicians in what might have been the exclusive dominion of this body, if it had not disdained a class so humble: while by obtaining exclusive possession of pharmacy, they have virtually rendered the diploma of the College of Surgeons of no avail as an authority for general practice. Nine-tenths of those who still seek the surgical diploma are compelled to engage in general practice, which comprises pharmacy, and this branch they can embrace only by becoming members of the Apothecaries' Company also. Now as the Apothecaries' licence alone qualifies for full practice in physic, surgery, and pharmacy, it is impossible that the double qualification will be sought many years longer; and, in consequence, the College of Surgeons must in no long time sensibly decline.

If a well-qualified general practitioner be furnished, it is perhaps immaterial to the public from what source he is derived; but it does seem strange that the mode of qualifying him should be by engrafting physic and surgery on pharmacy, rather than by authorising the annexation of pharmacy to surgery and physic.

It is scarcely necessary to notice a later act (6 Geo. IV. c. 133.), passed for

explaining the 55 Geo. III., for it was enacted for a year only; it expired in August, 1826, and it has not been revived.

After the foregoing exposition of facts, there can be but little difficulty now in detecting the errors and defects of a system of polity incongruous and inefficient. In each department there is much to correct; and the whole requires to be so organized, that the several parts shall be in harmony with each other. The only remaining question to be answered, then, is—Of what species of practitioners should the profession consist? and this being decided, What powers and protection should the legislature afford them?

At the risk of having imputed to me an undue leaning towards my own branch, I must nevertheless plead for the continuance of physicians as a component part of the general profession, and a class distinct from every other; and, judging as I do on this subject, I would deem the extinction of this class the greatest calamity that could befal the profession—one which could not fail in time to reach in its effects even that class which is now desirous of its downfall. Whence has physic derived the dignity which, in despite of the many evils that have through its misgovernment beset it—still attaches to it—but from the liberal cultivation, literature and science, of the well-educated physicians? The same means which have elevated the profession to its present rank, are equally necessary for upholding it; and is it to be imagined that the high character assigned to it by such men as Parr and Blackstone will continue to be merited if there are only general practitioners to support it? It is no indignity to these gentlemen to say, that as a body they are utterly incompetent to maintain the elevation which the profession has through the higher classes reached. Destined as they are for the exercise of laborious and arduous duties, they are far better employed in the few years allotted to their professional education in acquiring the knowledge which is to fit them for their special career, than they would be in cultivating more extensively the higher faculties of their intellects. That they should, in addition to their professional acquirements, cultivate these faculties to any extent capable of much enlarging even their own science, still less of shedding any bright lustre on the profession to which they belong, is, except in very rare instances, utterly impossible; and if this lustre were dimmed by the extinction of that class from which its brightness has been derived, would not the whole profession feel the proportionate decline in general estimation that must inevitably ensue?

Abstractedly, then, from all other considerations, the class of physicians deserves to be maintained, were it only for preserving the connexion of the profession with general literature and science, without which it must lose the high distinction which has so long and so steadily graced it, and degenerate eventually into a sordid trade.

But there are other grounds on which the continuance of this branch of the profession, as a distinct class, can be fully and successfully vindicated. It *has* existed as a separate branch for centuries, and has maintained its ground in public estimation, notwithstanding the want of all adequate protection from that corporate body which was instituted expressly for its support, and against the formidable competition of the surgeons and general practitioners, which has, for the last half century, been progressively and rapidly increasing. A branch which could retain its hold of public favour under such neglect and opposition, must have some inherent qualities for benefiting the public, to account for its still possessing any portion of their regard; and on this ground alone it ought not to be lightly set aside.

A further justification of physicians forming a distinct class, exists in the well-established fact of the large proportion, in the aggregate of human diseases, which the medical bear to the surgical. Whence it follows, that though all surgeons must of necessity practise as physicians, all physicians need not be practical surgeons. The public has ample need of physicians in the more limited sphere of practice; and so long as the public see an advantage accruing to them from this limitation, and hold in estimation the literature and science with which the cultivated physician is imbued, there seems no sufficient reason for extinguishing this class, or for causing it to merge in one of inferior degree.

On the same principle may be justified a class of surgeons as a distinct branch; who, though they must practise physic, and should be fully qualified

by their education so to do, need not necessarily comprise pharmacy, or become identical with the general practitioner. So connected, however, are the provinces of the surgeon and the general practitioner now become, both in education and practice, that it is a solecism in legislation to require pactitioners so closely allied to emanate from different sources.

General Practitioners.—It is obvious, from what has been stated in the earlier pages of this essay, that physicians and surgeons combined do not adequately supply the public wants, and the exigencies which have called into existence an additional class, and procured for them legal recognition, must, by this time be sufficiently clear. To such exigencies the legislature must contend; and in yielding to them, by passing the Apothecaries' Act of 1815, it only discharged a bounden duty. If this duty has not been performed in the best manner, the fault is chargeable neither on Parliament nor on the Apothecaries' Company, but on the two Royal Colleges; both of which, in this respect, failed egregiously in the duties which they were bound to perform. A very little observation would have shewn them the revolutionary change which the profession was daily undergoing; a slight knowledge of the elements of political science would have sufficed for reasoning justly on the facts so abundantly submitted to their view; and, if a vain pride had not engendered an inveterate and senseless contempt of pharmacy, they would have seen the necessity of recognizing this as an essential element in the qualification of the general practitioner, and have lent their aid to supply a want that could no longer be resisted.

The final question becomes at length reduced within very narrow limits: what are the special reforms which the legislature, by its fiat, should now effect?

If physicians are to continue as a separate class (and that they will ever be displaced, or amalgamated with other classes, I have no apprehension), they should still emanate from the Universities, and from no other source. That the primary qualification should ever be derived from a College of Physicians, I hold to be a proposition at variance with all sound principle, as I hope by and by to render clear. The standard of qualification ought to be high, both in respect of professional and general knowledge; and evidence of ample and liberal cultivation ought to be enforced. But the standard should not be too high, nor exceed what practical utility requires; and in determining it, the guidance followed should be that of sound experience, not of hypothetical speculation. In the first place, it should not be so high as, by the time, cost, and mental labour necessary for attaining it, to circumscribe within very narrow limits the class of practitioners to which it applied; for the effect would be precisely that of excessive duties in commercial traffic—namely, to drive out of the market the lawful article, and substitute an inferior contraband. If the department of physic be of any value, and worthy of being maintained as supplying a marketable commodity, the error must not be committed of enhancing its wares so much by the cost of production as to render them unsaleable; thus betraying into ruinous speculation and eventual disappointment, those who, in accordance with, and on the faith of, legal injunctions, and incited by a laudable ambition, should give a preference to this branch. On dispassionate consideration, there seems to me far greater hazard in fixing the standard too high than too low. In the first place, a very high standard, however imposing it may appear to the speculatist, must, in a great degree, be inoperative, from the mere inequality of human intellects. All have not the intellectual powers capable of attaining a very high standard; and with the more moderate intellects it must fail of effect, whatever the cost of time and labour at which they endeavour to reach it.

Another reason against fixing the standard too high, is, that it is quite unnecessary to do so. Medium attainments in general literature and science, such as befit the scholar and the gentleman, being ensured by adequate provisions, all higher cultivation may be safely entrusted to the incitement which interest and ambition are sure to give. They whose mental powers are capable of higher exercise, are little likely to leave such powers dormant; and inferior minds would profit little by such cultivation being forced on them. In judging this subject, too, the relative situation which the physician must henceforward hold in the profession, should be taken into account. All mo-

nopoly must, in the present day, give place to the sounder policy inculcated by principles of political science, and which is rapidly moulding all our institutions into new forms, and establishing them on a sounder basis.

Without special protection, or exclusive rights, physicians can only hope to compete with their rivals in practice through the superiority of their cultivation and intellectual attainments; and, thus incited, they will be little likely to neglect what must to them be their main support. It is only by keeping in advance of the general practitioner, in general literature and liberal science, that they can have any counterbalance to the many advantages which the latter enjoys; and that they will neglect what self-interest so obviously dictates, is little to be apprehended.

Whatever the standard may be, or the ordeal by which the candidate for a medical degree is to be tried, this, when once passed, should be conclusive, and no further trial or examination by chartered companies should be permitted. A degree being once obtained on full trial from a competent University, there can be no pretext for the person whose competency is thus avouched being subjected to further tests; and least of all is it fitting that the right of retrying him should be vested in those who are to be his future rivals and competitors in practice. If incompetent, his original degree should not be given; and if competent, this degree should entitle him to enrolment in any corporation of physicians that might exist: the only function required from such a body, in this respect, being that of verifying the academic degree.

Some incorporation of physicians is indispensible, for conducting the general government of the collective body; but its functions should never extend to conferring the primary qualification, as has of late been inconsiderately proposed, and as has, to a certain extent, been hitherto practised by the College of Physicians. The main function of the physicians' corporation should be to verify the degrees of applicants, and, on these being proved, to enrol the individuals as members of the body corporate, entitled by such enrolment to all the rights and privileges conferred by the statute of incorporation. In such a corporation, no gradations of rank or distinction could be needed, save what the formation of a suitable executive would require; and this executive should be elected by the commonalty. Convenience would require this elective franchise to be exercised by the members resident in London, or within a certain distance of it; and in order to ensure a sound discretion in the exercise of it, it might, with every propriety, be limited to members of a certain standing—say those who had been members for five or seven years; which would guard effectually against those sudden incitements and the unreflecting zeal by which younger members would be most likely to be affected. If the members of the executive council were elected by the free choice of the commonalty, there seems no valid reason why the appointment should not be for life; from which, greater steadiness in the government of the College would result, than if such elections were periodic. So few and simple are the ordinary functions of a College of Physicians, constituted as it ought to be, and restricted in its powers of doing evil, that frequent change of the individual governors could not be necessary, while the agitation and intrigues to which it would give rise could not fail of proving a positive nuisance. An adjustment of the present College, which should open its doors so as to admit all who are entitled to its protection, equalize its members, and give to these the privilege of having some voice in the appointment of the executive council, would be all the reform that this branch would need. All medical Graduates of British Universities should have the right of admission to the commonalty, on proving their degrees; and in order to ensure a general equality of qualification, a definite standard of education should be furnished, to which Universities granting medical degrees should be required to conform.

Equalization of qualification being thus insured, all pretext would be removed for making distinctions among physicians, by gradations of Collegiate rank, which only minister to unseemly pride, and confer no public benefit whatever. Election to the Council would afford sufficient opportunity for conferring merited distinction on those more highly-gifted individuals whom the commonalty would wish to honour; and to the hands of men so distinguished, and so chosen, the affairs of the College might with full confidence be entrusted.

Some provision should exist for granting admission to physicians of foreign universities, who might settle as practitioners in this kingdom.

The only remaining purpose of the legislature would be, to make suitable arrangements for the qualification and protection of surgeons, and of general practitioners; and so interwoven are the procedures of the College of Surgeons, and of the Apothecaries' Company now become, that it is impossible to separate the consideration of them. To a certain extent their functions are identical; the main purpose of both being to supply the public with well-qualified general practitioners. Why two corporate bodies should exist for effecting this very simple purpose, it would be difficult to assign any satisfactory reason, while much incongruity and inefficiency may be traced to their separate pursuit of it. The College of Surgeons cannot now accomplish it completely in any instance, having suffered the right of combining pharmacy to be wrested from them by the Apothecaries' Act of 1815; and as yet the Apothecaries' Company have not rendered the surgical attainments of their licentiates so perfect, as to make them wholly independent of the College of Surgeons. Yet the dependence is more a matter of feeling than of legal necessity; and it would speedily cease, if the present state of the profession were to continue. As yet the College of Surgeons exists, and has some hold on public favour; and the Apothecaries, though anxious from the best feelings to perfect the qualifications of their licentiates, are slow to complete their surgical competency, lest they should seem to trespass too much on the province of the surgical College. And here we see a clear instance of the injury resulting from a disjointed system, a similar one being afforded by that of the Surgeons in their relation to the College of Physicians. It was necessary that surgeons should practise physic, and a matter of notoriety that they did so; and yet the College of Surgeons insured no competency of knowledge for such practice in their licentiates, because they were not prepared to avow the practice, or to profess openly this encroachment on the sister College. In like manner, the general practitioner required to be qualified in surgery—which is effected, not by the completeness of surgical qualification required by the Apothecaries' curriculum—but by young men actually becoming, by separate and distinct courses of education, examinations, and licenses, first surgeons, and next apothecaries!

How such an anomaly as the co-existence of two corporations so analogous in their purposes, has sprung up, has been already explained. For the confusion thus introduced into the medical polity of the nation there seems now no remedy, but that of consolidating both these bodies in one corporation. By such a union, simplicity of organization would be restored, and far greater efficiency would result, than the separate and conflicting bodies can ever realise. By the united body every requisite function could be fully and effectually performed; and candidates for admission would be spared the undeniable evil of undergoing a double qualification in order to obtain it.

It would be necessary, however, in order to supply the wants of the public, and render the cost of qualification proportionate to the probable amount of remuneration, that there should emanate from this united body two classes of practitioners, one more expensively educated, and more highly qualified; and this class might confine its practice to surgery and physic: the other adequately qualified for the exercise of its duties, though at less expense,—and combining pharmacy with its other practice. From the higher class, hospital surgeons and teachers of anatomy and surgery should be exclusively taken; and a provision should exist, by which members of the second class should be capable of ascending to the first, whenever it should suit their purposes or inclinations so to do. The petitions submitted to Parliament last session, and the Bill founded on them, suggest that some provision should be made, by which physicians desirous of becoming general practitioners, should be capable of qualifying themselves, by such trials as, leaving unquestioned their knowledge of physic, should test only their acquaintance with surgery and practical pharmacy, these not being attested by their academic degree.

The government of the united corporation should be such as has been already proposed for a College of Physicians; that is, the body should consist essentially of a commonalty only, and

an executive council should be elected by the commonalty. The elective franchise should belong to the first class only; and in this there would be no injustice, this class being open to all who choose to enter it; and the second class taking a different rank, in order to suit their own purposes. A member of the second class, ambitious of higher honours, would have only to qualify himself, by conforming to those regulations provided for the first class, to entitle him to a participation in their privileges. Whatever is arranged respecting physicians, surgeons, and general practitioners, respectively, should apply equally and similarly to each division of the kingdom; and similar institutions for all should exist in the three capitals of London, Edinburgh, and Dublin. Among these co-ordinate bodies mutuality of privileges should be established, so that any individual changing the scene of his practice to another division of the kingdom, would have only to enter *ad eundem* in the corporate body belonging to his new residence.

In fine, it would be very necessary that, whatever the government be under which the several departments of the profession are placed, some means should be devised for bringing them into combined deliberation, whenever subjects should arise to call for such collective counsel.

Provision should be made, too, for qualifying as midwifery practitioners, all, whether physicians, surgeons, or general practitioners, who should wish to embrace this branch of the profession.

CASE OF

ABSCESS IN THE ILIAC FOSSA AND PELVIS

Communicating with the Colon and Uterus—Obliteration of the Femoral and Iliac Veins.

To the Editor of the Medical Gazette.

Sir,

Should you think the accompanying case worthy of insertion in your journal, I request you will give it a place at your convenience.—I am, sir,

Your obedient servant,

George Cursham, M.D.

3, St. Andrew's-place, Regent's-park, March 10, 1834.

A woman, about 36 years of age, of a healthy constitution, was confined of her seventh child the first week in October. Nothing untoward, I understood, occurred during her labour, but the expulsion of the placenta was followed by considerable hæmorrhage.

A few days after her delivery, she complained of pain in the right iliac region, for which (after it had continued about a fortnight), she consulted a surgeon, who ordered leeches, fomentations, &c. She remained under his care about five weeks, at the end of which time she was better, but still somewhat lame. About a week after this, towards the beginning of December, *her leg failed her more*, as she expressed herself, the pain in the region of the pelvis increased, and she was compelled to keep her bed.

She consulted some one else at this time, but I am not aware what treatment was pursued during the fifteen or twenty days he attended her. For three weeks after this nothing was done, but she was quite unable to leave her bed. Application was now made to get her admitted into the hospital; but being considered as labouring under pthisis, she was not received.

I first saw the patient about the latter end of January, and found her in the following state:—

Great emaciation; lying in bed on the left side, with the right thigh carried up over the abdomen, so as to bring the limb into the greatest possible degree of relaxation; no pain when perfectly at rest, but any attempt to extend the limb caused intense suffering, and she could only bear it to be brought to the state of demi-extension.

There was no tumor nor discolouration of any part of the limb, but the whole extremity was œdematous, somewhat firm, but still pitting under pressure. This symptom occurred about a fortnight ago.

The tongue is somewhat dry, reddish, and smooth; has severe diarrhœa; no swelling nor tenderness under pressure, in any part of the abdomen, Could take simple food tolerably well. Slight cough, with trifling mucous expectoration. I could only examine the anterior part of the chest, but here it gave throughout a good sound on percussion, and the respiration was every where audible and natural.

The skin was hot and dry; exacerba-

tion of fever in the evening, followed sometimes by sweats; pulse 120, small.

On inquiry, I learnt there was a discharge of puriform fluid *per vaginam*—some days more copious than others. She has had difficulty in passing urine, but that symptom has disappeared.

On examination *per vaginam*, I could not detect any disease of the uterus or vagina; pressure, however, on the right side of the latter canal caused great pain, and I thought there was an obscure sense of fluctuation.

From the previous history and present symptoms of the case, I was of opinion that an abscess had formed in some part of the pelvic cavity, and which had probably made its way through the uterus or vagina. The œdema occurring in one extremity alone, led me to believe in the existence of some obstruction to the course of the blood through the veins of the limb.

I saw no reason for believing in the existence of phthisis pulmonalis.

I saw this poor woman from time to time; the symptoms remained much the same, except that about ten days before her death she had several severe rigors, followed by heat and sweats. About this time œdema of the opposite limb took place. It was attended with considerable pain, but pitted under pressure as the other extremity.

She died February 14th.

Appearances on Dissection.

Externally—Great emaciation; œdema of both lower extremities.

Abdomen.—A large cavity, containing putrid matter mixed with portions of coagulated blood, occupied the whole of the right iliac fossa. The psoas and iliac muscles were almost entirely destroyed. The abscess appeared to have followed the course of the former, and had also burrowed deeply amongst the adductor muscles of the thigh. The edges of the ilium and pubis, which form the brim of the pelvis, were denuded; and a portion of the capsular ligament of the hip-joint was destroyed, so as to lay bare a part of the head of the femur. The cartilage, however, covering this was not ulcerated, but presented a darker colour than usual, and had lost the polish natural to it in a state of health.

The anterior boundary of the abscess was simply formed by the peritoneum, except at one part where this membrane was ulcerated, but where an adhesion was formed with the lower part of the ascending portion of the colon; thus at this part the intestine formed a boundary to the abscess, and prevented effusion into the cavity of the peritoneum; but it was itself ulcerated, and formed a free communication with the abscess, so that feculent matter had passed into the cavity from the intestine.

The abscess further extended into the cavity of the pelvis by the side of the uterus; and a communication was formed between it and the abscess, by means of a small opening a little above its cervix.

The upper part of the uterus adhered, by means of its peritoneal covering, to the small intestines. A circular portion, of about the size of a shilling, was completely destroyed (but so as to leave its peritoneal coat entire), or, at least, it seemed to consist of nothing more than putrid sanies, although the remaining portion was firm, and apparently healthy, except just at the point of communication with the abscess.

The external iliac artery and vein, as well as the nerves passing to the anterior part of the thigh, were comprised in the abscess; the artery much contracted, but pervious; the vein had a cordy feel, and contained a firm coagulum, easily separated from the vessel; the inner coat of which was smooth and pale, but its outer coat was much thickened.

This state of the vein was traced from the commencement of the external iliac to the passage of the femoral vein, through the adductor muscle of the thigh.

On the *left side*, the external iliac and femoral veins presented to the touch an unusual degree of firmness. On opening them, their contents were found to resemble a mixture of grumous blood and pus; the cellular coat was slightly thickened, but the inner tunic pale and polished, as on the other side.

The *Vena cava* presented a healthy appearance; no disease was observed in any of the other abdominal vicera.

Thorax.—Lungs quite free from disease, as were also the heart and great vessels.

Observations.—In tracing the history of this disease, and comparing it with the appearances found on dissection, it will, I think, appear probable that it had its origin in an inflammation of the cellular tissue, in some part of the iliac fossa, a short time after delivery.

The first symptom observed was pain in the groin and iliac region; alleviated, but not subdued, by the treatment employed. After a short time, this pain returned with increased violence, accompanied with great suffering when the limb was extended; the cause of which is sufficiently explained by the manner in which the psoas and iliac muscles, as well as the nerves of the thigh, were found implicated in the disease. The œdema of this (the right) extremity, did not occur until upwards of *two months* after the commencement of her illness.

With regard to the obliteration of the left iliac vein, I think it more than probable that it occurred about ten days before her death, at the time she was affected with rigors. The simultaneous occurrence of œdema of this limb, with the above symptoms, together with the semi-fluid consistence of the contents of the veins, seem, I think, to justify this opinion.

With this view of the case, I should conceive that the obliteration of the veins on the right side took place in consequence of their becoming implicated in the destructive inflammation going on in the iliac fossa. The veins on the left side were not implicated in the abscess, but they presented no decided marks of inflammation; and the appearance of their contents, joined to the symptoms observed during life, lead me to incline to the opinion that the morbid condition of the contents of these vessels was produced from an absorption of pus.

Three cases, in many respects resembling the above, are related by M. Velpeau, in a paper on "Phlegmasia alba dolens," inserted in the "Archives Générales de Médecine," vol. vi.; and one by M. Bally, in the "Revue Générale de Médecine," for January 1827.

In examining the details of M. Velpeau's cases, it will be seen that shivering and fever, followed by severe pains in the region of the pelvis, preceded, for a greater or lesser period, the œdema of the limbs. For these and other reasons, which are fully stated in his analysis of the cases, he draws the conclusion, that the disease of the veins was *consecutive* to the formation of the abscesses. If dependance is to be placed on the morbid appearances, it is evident that, in one of the cases at least, (that in which the patient died on the 60th day) inflammation of the veins cannot be considered as the cause; since M. Velpeau expressly states, "Les vaisseaux eux-mêmes n'offraient aucune altération appréciable de leurs tissus"—— seulement elles contiennent de la matière purulente mêlée du sang, mais qui était libre, et nullement adhérente à leur parois." Hence he remarks, "Je crois n'avancer qu'une conséquence naturellement tirée des faits, en disant qu'ici le principe du mal était dans les articulations; que c'est de là qu'il est parlé, et que le reste ne doit être regardé que comme dépendance ou comme consecutif."

Mr. Arnott, in his very interesting paper, "On the secondary effects of inflammation of veins *," remarks on these cases as follows:—

"Upon the connexion of the affection of the joints with inflammation of the veins, there is an appearance of direct evidence in two of the cases related by M. Velpeau, although the description is somewhat incomplete."

That there was a *connexion* between the disease of the veins and the abscesses, will scarcely admit of a doubt; but if Mr. Arnott intends to infer, that the *latter* were the consequence of the *former*, I do not think he is borne out in this opinion by the facts of the case. It appears to me, on the contrary, that both these cases, and the one above related, tend to invalidate the general conclusion drawn by Mr. Arnott—"that the inflammations and abscesses which arise in remote situations, after injuries, or after the process of parturition, are attributable to the existence of phlebitis in the part of the body primarily affected." Indeed, I think the case of Griffin, related by Mr. Arnott *, admits of the interpretation given of the above cases; viz. that the disease in the veins was consecutive to the formation of abscesses in various parts of the body. These, it is stated, had existed for many months before the death of the patient; and it is remarked, that he never complained of the right thigh or leg, but that *latterly* this (the right) leg and the other had become œdematous.

That abscesses and inflammation, in remote parts of the body, frequently supervene upon inflammation and suppuration of a vein, appears clearly proved, and Mr. Arnott's paper contains many interesting

* Medico-Chirurg. Transactions, vol. xv. p. 1.
† Ibid. p. 109.

examples of this. But, on the other hand, it is not less certain that inflammation and suppuration, or at least some morbid condition of the veins, or of *the fluid circulating in them*,—often supervene upon the existence of abscesses or suppurating surfaces in some part of the body.

The *coincidence* of these affections is sufficiently proved by numerous facts; but, to ascertain the real nature of the *connexion* between them, it is important that the *order* in which they occur should be clearly ascertained.

CASE OF

DISEASE OF THE SPINAL CORD;

With Observations.

By H. P. Robarts, Esq.

A young lady, aged 24, of a robust and healthy constitution, but of a nervous temperament, was attacked with the small-pox, in July 1828, having been vaccinated in early youth. The convalescence from this disease was characterized by a disposition to diarrhœa—excessive while it lasted, but readily controlled. About two months after her recovery, she began to complain of an occasional stiffness and numbness in the right leg and thigh: at times there was a difficulty of bringing them forward in walking, and in the attempt to do so they were propelled against the left. The patient described her loss of power by saying that the leg, at these times, seemed to her as senseless as a log of wood. After having stumbled in this manner, she would walk on steadily for a quarter or half an hour, without experiencing a recurrence of the difficulty. This affection was increased by any agitation of mind: she could not walk across the room, when excited, without making two or three of these false steps. It was also more distressing on going up stairs. There was no tenderness at any point on the spine; no headache, no giddiness, no dimness of sight, nor any other evidence of disease, either of the encephalon or of the spinal cord. There was no defect in the general health; the appetite was good, though the bowels were disposed to be costive. Little was done for the complaint at this time. Sulphate of quinine and a gentle aperient were prescribed, but, as no evident advantage was gained, they were soon discontinued. In the June following, or about nine months from the first indication of the disease, it had become so serious an inconvenience that it occasioned a decided limp in her gait. Sir C. M. Clarke was consulted: he prescribed the ferrum ammoniatum, with an aperient pill to be taken at bed-time, when requisite. She took this medicine for the space of two months, but as she did not improve the quinine was tried again, but with no better success. In the month of August she was recommended to go to the sea-side, to bathe, and to adopt a generous diet. At this time the patient could not walk across the room without danger of falling, and the affection was confined to the right leg and thigh: the digestive functions were apparently vigorous. She returned from the country after a short stay, much worse, and to my surprise I found her confined to bed, with complete paralysis of the lower extremities. Mr. Kingdon was now consulted, and those who know that gentleman will not doubt that the spine was thoroughly examined: still there was no evidence of disease to be detected—there was no tenderness over any of the vertebræ. On raising the patient off her feet, and then allowing her to fall upon them so as to jerk the vertebral column, she evinced not the slightest uneasiness. Her general health had, however, rather declined, and the bowels were constipated. A pill of aloes and sulphate of iron was ordered to be taken three times a-day. This acted copiously on the bowels, and for the first month there was some improvement; the patient was enabled, with the assistance of one person, to walk slowly, and with a shuffling gait, across the room. It is remarkable that the right leg, which had been the first to suffer, was now stronger than the left. The improvement did not continue long; faintness, depression of spirits, and loss of appetite supervened, and the patient complained of pains about the hips. The aloetic medicine was diminished in quantity, but the case not improving, it was abandoned in December, after two months' trial. On the 5th of that month, the powder of the nux vomica was prescribed, in doses of half a grain, three times a-day. It was increased on the 8th to two-thirds of a grain; on the 11th to one grain; on the 18th to one

grain and a half; and on the 24th to two grains. Its usual effects, involuntary twitching of the muscles, followed, to the great annoyance of the patient, who earnestly requested that the medicine might be changed; and as the paralytic symptoms were increasing, and the condition of the health deteriorating, it was discontinued. From this time (the 28th of December) till the end of January, small doses of blue pill, with a sufficient quantity of aloes and rhubarb to keep the bowels regular, were given every night; but without producing any apparent effect upon the complaint.

Mr. Kingdon now saw the patient again. The spirits were depressed, and the digestive functions much impaired. With an effort of the body, one leg could be projected forward, and by another the other; there being a person on each side to assist. The decoction of bark, combined with rhubarb and ammonia, was prescribed (January 1830). The general health improved, and the paralytic symptoms were again slightly relieved. The patient remained in the same state the whole of this year, except that in addition to the loss of motion in the legs, there was also a loss of sensation for a short time in one of them, and when it recovered the other was attacked in a similar manner. There were also occasional catchings up of the limbs, and violent tremors, lasting for a few minutes only. Electricity was fully tried in the summer; shocks from a powerful machine were passed through the lower extremities, hips, and back, but no benefit followed. Dashing cold water on the back was equally unavailing. At the end of the year, all medicines, except an occasional aperient pill, were abandoned. About the beginning of the following year (1831), the numbness and loss of motion were complete from the toes up to the hips; the bowels became obstinately constipated, and the urine and fæces escaped involuntarily. A saline purgative was given, so as to procure one motion daily; and after this had been properly effected for a few days, the fæces ceased to pass away involuntarily, but the urine continued to do so. To combat this symptom, the tinctura lyttæ was prescribed, and I was much gratified to find, that, in less than two days, the medicine had produced the desired effect.

I now directed my attention to counter-irritation, and applied a blister on both sides of the lumbar region. Mr. Kingdon saw the patient again in the beginning of March, and recommended the application of a moxa over the superior posterior spinous process of the ilium, thinking that he observed a slight degree of tenderness at that point when firm pressure was made. The moxa healed after a few weeks, but the paralysis continued, or rather progressed, and the patient resolutely refused to submit to any further counter-irritation. All the plans which had hitherto been adopted had either been of no service whatever, or had only had a temporary effect, and she could not be induced to try any plan of treatment which would produce a sore, or give uneasiness in any way. As no sanguine hopes of a recovery could now be entertained, all measures for that purpose were given up. During this year, the general health was nearly faultless; the appetite was good, the sleep natural, and the spirits cheerful; the catamenia were regular, though scanty, and preceded by pain: she could sit up the whole day, and work, read, or amuse herself in any way that she pleased; felt no pain, or even uneasiness: the bowels, with the assistance of the saline purgative, were kept in tolerable order, and the sphincter retained a certain degree of power: the bladder, also, by the aid of the tinct. lyttæ, taken thrice a-day, was brought under the controul of the will; and, with the exception of the loss of motion and sensation, she enjoyed as perfect health as falls to the lot of most people. About the latter end of this year, I was requested to look at a small spot on the extremity of the back; it was an ulcer, as large as a sixpence, of an indolent character, and said to have been in the same state for the last two or three months. A lotion, composed of lunar caustic, was ordered to be applied to it frequently. I did not, at this time, see the patient often; and, when I did, I never saw the wound; for the friends assured me that it was doing well, and it was exceedingly inconvenient to show it, as that necessarily required that she should undress, and go to bed. About the beginning of January 1832, however, not having seen my patient for upwards of a week, I was summoned in haste to her; when I came, she was in bed, labouring under a high degree of fever,

with a rapid pulse and furred tongue. At the place where the wound had been, there was a patch, about the size of a crown piece, completely black, and surrounded by an erysipelatous blush for several inches; a common-sized probe might be completely buried under the reddened skin, and a most fœtid discharge issued from around the slough. The part was ordered to be bathed with a weak solution of chloride of soda, linseed poultice to be constantly kept over it, and she was directed not to lie upon the wound; at the same time, suitable constitutional treatment was adopted. Had counter-irritation been likely to cure her paralysis, it was now tried on the most extensive scale; for, when the slough separated, it left a wound considerably larger than the palm of the hand, and at least an inch and a half in depth; burrowing also, for a considerable distance, under the skin. The discharge was at first profuse; but the fever abated as the inflammation decreased, and the slough came away,—and the patient recovered her appetite and powers of digestion, so as to be able to support it. The sore gradually improved in character, and I began to hope that I should soon see her on the sofa again; but, alas! we were only gliding away from Scylla to slip into Charybdis. The continued pressure on the hips, from lying upon the sides, abraded the skin from those parts, and they speedily assumed the same aspect as the wound upon the sacrum had done: the sloughing process did not, however, proceed to the same extent as in the first instance; neither was the constitutional disturbance so violent: these wounds ran a similar course to the first one. In process of time, others broke out under the tuber ischii, on the inner side of each knee, and also on the outer sides of each ancle: these latter were never of very great extent; for, as the parts had but little weight to support, the effect of the pressure upon them was not great. The patient survived, in this state, till the 30th of December last, when she died completely exhausted; at a period of rather more than five years from the first appearance of the paralytic symptoms, and after having been bed-ridden for two years, with ulcers of the worst description: during this latter period, various contrivances were suggested for the removal of pressure, but they all failed; what relieved it in one place, only threw it upon some other. The patient often rallied, and at times all the wounds appeared in a healing condition: it was likewise observable that she was generally better in summer than in winter. Means were proposed for invigorating the system; but, latterly, she took a complete disgust to all medicines, and could not be persuaded to take any thing but an opiate combined with æther and ammonia: the ease and relief she experienced from her fainting sensations, induced her to have recourse to this remedy in the latter stages of the complaint. The bowels were kept in a state of tolerable regularity by the frequent use of clysters; but what added much to the misery of her situation was, that both the sphincter of the bladder and of the rectum had lost their power for a long time previous to her death, and the urine and fæces passed away unconsciously.

Appearance of the body 48 hours after death.—The emaciation was extreme; the knees were drawn up and contracted; the feet and legs were œdematous, particularly the right. There was a slight curvature of the spine towards the right, in the lumbar region. There was an ulcer upon the sacrum, showing the whole of the external surface of that bone in a state of necrosis, extending to the sacro-iliac symphysis on either side, and laying bare the posterior spinous processes of the ilium. There was another on the dorsum of the right ilium, exposing the dislocated head of the thigh-bone on that side, also in a necrosed state: below this, there was another ulcer, on the same side, through which the right tuber ischii was to be seen. On the left side, there was an extensive wound, reaching from the external parts of generation to the left ischium, and laying it bare for at least an inch around the tuber. There were scars around the knees, and upon the ancles, marking the places where wounds had been.

Very little appearance of disease was noticed about the brain or its membranes. There was a slight effusion beneath the arachnoid; and, on examining the base of the brain, it was thought that the pons varolii was rather smaller than it should be, and that it had a shrivelled appearance.

On removing the spinous processes of the dorsal vertebræ, a fatty tumor was

exposed opposite to the tenth, eleventh, and twelfth; it was about the thickness of the middle finger, and between two and three inches in length; it had pressed the spinal cord, or rather its membranes,—for there was no cord, at this point, to the left and anterior side of the canal: it was exterior to the theca, which was injected, and redder than natural above the tumor, but quite bloodless below it. On slitting up the membrane, to examine the cord itself, is was found in a healthy condition, both above and below the site of the tumor; but at that part it was entirely wasted away; not even a shred remained: it seemed as if the pressure had caused it to be absorbed, or rather as if it had been squeezed into two separate parts by the growth of the tumor; for nothing was left of it for the space of more than an inch; and the upper and lower portions of the medulla spinalis were connected by the involucra alone.

On attempting to dislodge the tumor (which was done before the cord was examined), it seemed to have formed an adhesion to the right side of the canal. By using a slight degree of force it gave way, and about half a pint of serum flowed into the canal. Looking to what had been the attachment of the tumor, a circular orifice was discovered, between the rings of the 10th and 11th vertebræ, which was found to open into a cavity behind the right pleura, and above the diaphragm, capable of holding about twelve ounces of fluid, and lined with a smooth polished surface. The connexion between this cavity and the canal appeared to have been occluded by the tumor, which did not simply lie against the orifice, but had its growth from the edges of it. The rest of the body was not examined, as these appearances were deemed sufficient to account for most of the phenomena which had occurred during life.

The first question which presents itself on reflecting upon this singular case, is, at what time, and in what manner, this tumor and cyst were formed, and by what degree (if I may be allowed the expression) of affinity they were connected together? I think it must be allowed, that it is highly probable it existed some time before the symptoms of paralysis were observed; for it must have been comparatively slow in its growth, and have allowed the parts time to accommodate themselves to the new state of things. It is therefore likely, that the momentary loss of power, which occurred at considerable intervals, and which was the first inconvenience which it occasioned, did not happen until this tumor had been growing for several months; and I am much inclined to believe, that its origin was antecedent to the attack of small-pox, and that it began two years previously, when (as I have been informed) she received a severe blow upon the back. No immediate consequences followed the accident; but it is possible that a small vessel might then have been ruptured, and a clot of blood effused, which, in process of time, might be partially absorbed, and partly organized. That thus a small tumor was formed, having within itself a power of augmentation, though necessarily crippled in this respect by its situation; that, as it grew, its capsule was attached between the rings of the 10th and 11th vertebræ, and the tumor, not being able to expand itself beyond a certain extent, exerted a considerable pressure between those vertebræ, until it at length projected between them; but that, while undergoing this pressure, that part of it which escaped became disorganized, and the capsule alone remained. Into this a fluid was secreted, and thus a portion of what had been the capsule of the tumor became a serous cyst. I am the more inclined to believe that this explanation is correct, because it was found that the tumor had no capsule on that side which was opposite the cyst, and that it had undergone a process of softening at that part. As the tumor was torn away from the side of the canal before the existence of the cyst was dreamed of, I am not capable of saying positively, whether the capsule and cyst were continuous.

The next point worthy of attention, is the symptoms which it occasioned. These were loss of sensation and motion. The case illustrates as simply as possible, what consequences are to be expected from a division of the cord. The tumor grew from the right side of the canal, and its presence, as might have been anticipated, first occasioned a loss of motion in the right leg and thigh; and it was not for many months after that the left became paralysed. It is

extraordinary that the remains of the spinal cord were found anterior to the tumor, which must therefore be supposed to have pressed upon the posterior column in the first instance, though the patient did not lose sensation for more than a year after the motive powers had been affected. I cannot explain this, except by supposing that the posterior column is firmer than the anterior, and that the pressure was felt first by the anterior, though more directly applied to the posterior*. The fact, at first sight, appears to be an evidence against the clear and beautiful arrangement of Sir C. Bell. It has been long known that paralysed limbs are more susceptible of injury than other parts. Mr. Earle has published some cases, shewing how ill they resist the effects of heat and cold. In the present case this loss of a preservative principle was wofully exemplified in the sloughing that followed the least pressure. The loss of nervous influence seemed to render the parts more amenable to the effects of mechanical agents. This is not, perhaps, a new or astonishing fact; but the readiness with which reparation took place when the pressure was removed, the celerity with which these ulcers healed, when the patient was placed in such a position as not to lie upon them, if not a novel fact, is at least one which has not been dwelt on, but which deserves an attentive consideration. It shews, as far as one case can, that the destruction of the protecting agents, the nerves, only destroys those powers by which the parts resist external injury; that it has no influence whatever upon the circulating or absorbent system (in this case the spinal marrow was completely divided); they therefore must receive their nerves from some other source than the spinal cord, unless we are prepared to admit, that they possess a power of action *per se*. It would also plainly appear, that the processes of granulation and cicatrization are in no way dependent on the brain and spinal cord, since they can go on vigorously when the absorbent and circulatory apparatus are healthy, even though the part in which they take place should be cut off from that nervous centre.

The last observation which I would make, has regard to the effects of the remedial measures which were adopted. The patient went out of town, partook of a generous diet, and came home after a short stay of a month or six weeks. When she went, she could walk across the room; on her return, she had not the slightest power over a single muscle of the lower extremities. It would seem that the change had the effect of producing a certain degree of plethora in the system, which was favourable to the growth of the tumor, and increased the bad consequences of the pressure. The purgation which was afterwards instituted, reduced this plethora in a slight degree, and in the same ratio relieved the pressure; consequently the symptoms were slightly ameliorated; but as it was not possible to reduce the size of the tumor, or to arrest its growth, the symptoms necessarily continued, with little variation, steadily increasing.

The effect of the tr. lyttæ is perhaps the most singular of the therapeutical phenomena. After a complete incontinence of urine had been established, it entirely restored its power to the sphincter vesicæ, and for a twelvemonth it was maintained by its agency alone; for if it was omitted for twenty-four hours, the urine would pass away involuntarily, and continue to do so until the tincture was resumed. It is singular that any drug should act so exclusively upon the muscles of the neck of the bladder, not affecting the rest of the system, and stimulate its nerves to action, after their sensibility to ordinary impressions had been entirely destroyed by pressure. It is extraordinary; for although it cannot be supposed that the spinal cord was divided at this time (two years and a half previous to the patient's death), yet the pressure upon it must have been considerable, since it had produced a total paralysis of the lower extremities. This fact, demonstrating the power of this drug over the sphincter vesicæ, deserves to be carefully noted, as it is likely to prove highly beneficial in other cases of paralysis.

10, Everett-Street, Russell-Square,
March 1, 1834.

* In a discussion upon this case, Mr. Greville Jones observed, that it was a common occurrence for patients to lose the power of motion, and yet retain their sense of feeling, in cases where the cause of the disease appeared to be so situated as to operate equally on each column of the vertebræ; and he adverted to some instances of fracture and disease of the bone, in proof of his assertion. He considered that the motive powers were more readily affected than the sentient.

PRACTICE OF FORENSIC MEDICINE,

AS CONDUCTED IN THIS AND OTHER COUNTRIES.

To the Editor of the Medical Gazette.

SIR,

A "tale of mystery" has been going the round, of the newspapers during the last week. A skeleton, it seems, was found in a field near Oxford; and an inquest was held upon it. It does not appear that any professional investigation was made as to the sex, or age of the individual to whom the bones belonged, nor as to the condition of those parts, whereby an opinion might be formed how long they had lain in the earth; but an old labouring man was examined, who told a tale, that fifty-six years ago he had reason to suspect that a man was murdered and buried in this place. The jury were *satisfied*, and returned a verdict of "Wilful murder against some person or persons unknown."

I could not help being struck, sir, with the contrast between this English mode of medico-legal inquiry, and the French manner of managing such matters; for example, in the case of which you gave an abstract in a late number of the Gazette, where the skeleton of a murdered female was amply identified after an interment of nearly twelve years; and my dissatisfaction was increased when I called to mind a somewhat similar example, which I had lately met with in an official document, by Dr. Wagner, of Berlin.

But the mystery-case above alluded to is only a small sample of the mode in which judicial inquiries are marred in this country, for want of proper investigation; and I think the defect is principally attributable to the nature and constitution of our coroners' courts. The officer who presides is held in no very high public estimation: he is frequently a man of very limited acquirements—a mere lawyer; his field of labour is generally extensive, and he has, of course, much business on his hands. He gathers a jury, as chance throws them in his way, of personages commonly more superficial than himself, and who, being generally impressed into the service, and acting reluctantly, are easily *satisfied*, and find whatever verdict is suggested to them. If medical evidence be called at all, it is such as gives least trouble to procure, for the coroner has no means of remunerating competent witnesses, whose testimony might be desired: so that the evidence which is obtained is generally volunteered, and often obtruded by persons who have no valuable information to give, nor object perhaps, except to acquire a little petty notoriety.

Now, sir, the coroner's is unquestionably an important office, however trivial and degraded it may appear in the eyes of many persons. The coroner is a law officer, whose duties, like those of the sheriff, require him to act both in a ministerial and a judicial capacity; but undoubtedly, sitting as he does so often upon inquests which involve medical considerations, he ought to be possessed of a large share of general information, of which medical knowledge should form no small part. To argue that he ought, on this account, to be *bonâ fide* a medical man, is going rather too far. The coroner has a great deal of civil as well as criminal business to conduct, for which the acquirements of the lawyer are much more necessary than those of the medical man. But while the addition of a certain portion of medical knowledge is requisite, and perhaps sufficient, for the coroner in most cases, yet instances constantly occur in which the ends of justice cannot be satisfied by simple and hurried investigations: the presence of competent medico-legal witnesses, persons of experience in the conducting of scientific inquiries, is highly desirable. This, however, is a species of aid to the administration of justice for which the wisdom of our legislature has never yet provided.

In France, where the faculties and the academies of medicine, and not a few of the mass of the profession, consist of pensioned employés and government officers, such investigations as those alluded to are known to be conducted with all the requisite ability and due observance of justice. The names of Foderé, Marc, Chevallier, Barruel, Orfila, and a number of others, have acquired an European celebrity by such labours. And in Germany the admirable order of state medical officers, known by the titles of *Kreis* and *Stadt-Physiker*, is specially provided for the performance of all duties of this kind,—to act as the enlightened referees, by

whose aid the serious medico-legal difficulties which so frequently present themselves may be determined.

In Rust's valuable paper, which you published in the Gazette a short time since, a brief sketch of the qualifications required of the Physikus in the Prussian states was given. Allow me to give, by way of supplement, a short abstract (from Dr. Koch's book) of the principal duties that are assigned to that officer, in the discharge of his public functions.

"He shall bestow (these are the words of his Commission) his especial attention on the salubrity of the district committed to his charge. As soon as any symptoms of contagious or epidemic disorders are discerned, he shall promptly adopt the speediest measures that prudence suggests, and apprize the boards whom such events chiefly concern. He shall comply with the laws of the medical profession, and strenuously see that they be complied with by others. He shall further, when called upon by the government-board, superintend the treatment of the sick poor, and take a fair share of the business of the medical police of his district generally. Upon all occasions, when called upon, he shall be ready to engage in the *post-mortem* examinations which devolve upon him, and in the medico-legal investigations relative to lesions and injuries to living persons, and concerning the state of mind and body of individuals submitted to his scrutiny, giving a deliberate judgment in each case. He shall also devote particular regard to the progress of vaccination. All this, as well as all other business confided to him by the proper authorities, he shall perform cheerfully. And, in fine, in all his official relations, he shall so conduct himself as a faithful and diligent Kreis-physikus should and ought to do. *"

Some able reformers (the Retired Practitioner, for example) have suggested the opening of a wider field, and the proposing of higher honours, to aspirants of distinguished and superior accomplishments in our profession. In the establishment of a Physicate, it seems to me that there would be both distinction and utility combined. If in the changes which no doubt will result from the present parliamentary inquiry, the formation of an order of medical referees, to act, among other important duties, as coroners' assessors, and in many other respects like the *Physiker* of Prussia, could be secured, I conceive it would be conferring one of the greatest benefits on the community, while it would afford encouragement for a laudable ambition in the profession, that could not fail to promote the interests of medical science.

Such an order, however, can scarcely be fixed on a perfect footing here, until the means of procuring the necessary acquirements are first rendered attainable; and this, evidently, can only be by the establishment of *practical* schools. The teaching of state and forensic medicine is, at the present moment, only in its infancy in this country. It can only be taught theoretically among us; for to many, if not most of the teachers, the investigation of a *real* medico-legal case—through which alone real practical information can be derived—very rarely, or never, occurs. And if the present system pursued on inquests—that of committing medico-legal investigations to casual witnesses—be allowed to continue unaltered, there is no prospect of the improvement of legal medicine in England, or of being able, at least in the first instance, to establish an efficient body of medical men, corresponding with the Kreis and Stadt-physiker of Prussia.—I am, sir,

Your obedient servant,

W. Cummin, M.D.

Lecturer on Forensic Medicine.

24, Great Russell-Street,
March 15, 1834.

* *Vollst. syst. Sammlung der Preussischen Medicinalgesetze und Verordnungen. Magdeburg*, 1833, p. 39-40.

MANAGEMENT OF MADHOUSES.

To the Editor of the Medical Gazette.

Sir,

A copy of the following petition has been presented to the House of Commons, during the present session of parliament, by the member for Wakefield, Daniel Gaskell, Esq.; and a similar copy will, I expect, in the course of a few days, be presented to the House of Lords by Earl Fitzwilliam.

I have transmitted this petition to you, for publication in your valuable

journal, in case you should consider it an object worthy of your attention.

I am, sir,
Your obedient servant,
CALEB CROWTHER.

Wakefield, 13th March, 1834.

To the Honourable the Commons, &c. the Petition of Caleb Crowther, Physician, practising in Wakefield, humbly sheweth,

THAT your petitioner has, professionally, for many years attended the pauper lunatic asylum of this place, and that since he resigned the office of physician to that institution, he has visited a great number of madhouses and public hospitals, in different parts of the empire, with a view of comparing their respective merits and defects, and of forming a just estimate of the first principles necessary for the government of madhouses.

That your petitioner humbly prayeth your Honourable House to appoint a Commission, during the present session of parliament, to examine, without exception, all the public and private asylums for the insane in the united kingdom; and to compare their administration with that of some of the best regulated hospitals and infirmaries.

That the infirmaries at Glasgow, Liverpool, Manchester, Birmingham, and Leeds, in the opinion of your petitioner, afford admirable specimens of hospital discipline.

That the Asylum at Glasgow, and the Retreat belonging to the Society of Friends at York, afford the most favourable examples of a public and private madhouse which your petitioner has witnessed.

That although great improvement has been made in the management of madhouses during the last twenty years, your petitioner has reason to believe that great abuses, great negligence, and great licentiousness, still exist in some of them.

That the first principles necessary for improving the management of madhouses, are daily visitation, scientific governors, the admission of patients in the first stage of the disease, and regular employment for the convalescent insane.

That the superiority of our infirmaries has, with great justice, been ascribed to the assiduity of their daily visitors; who minutely examine the cleanliness and ventilation of the house, the quantity and quality of the food, the conduct and behaviour of all the officers, servants, and patients in the institution. Whatever is found amiss is recorded in a book, submitted to the inspection of a weekly Board of Governors.

That this system of visitation has been adopted at the asylum at Glasgow, and at the Retreat at York.

That, without the aid of such a system, the visits of Governors once in three months will ever remain ineffective.

That, in the opinion of your petitioner, there exist in every part of the country benevolent beings of both sexes, who would accept and faithfully execute such a trust gratuitously.

That the Governors of madhouses ought either to understand the moral and medical management of the insane, or, like a sensible jury, they ought to be guided by those who do understand the subject.

That the great errors committed by the visiting justices, in medical matters, at the Penitentiary at Milbank, at Cold-Bath-Fields prison, at the asylum and prison at Wakefield, and at the asylum at Hanwell, prove how unfit magistrates are to govern such institutions, and indicate the necessity, in this country, of the appointment of a minister of health. That magistrates do not understand when the insane are judiciously treated, and will not submit to the appointment of visitors, because they say that it will create *imperium in imperio*, and derogate from their power.

Your petitioner, therefore, begs permission to suggest to your Honourable House, the propriety of putting all madhouses, both public and private, under the management and entire direction of a Medical Board, consisting of twelve persons; nine or ten of that number to be physicians, and the remainder civil engineers. Three members of this Board—two physicians and one civil engineer — to be required to visit four times a year, at irregular intervals, every asylum in the united kingdom.

That correct reports of the history and treatment of every insane case be required to be transmitted monthly to this Board, in London. That such reports would serve to stimulate the diligence, and to expose the neglect, of the medical attendants, and to improve and equalize the mode of treating the insane.

That, at each visit, the travelling physician ought to be required to examine every individual patient, and to ascertain the correctness of the reports transmitted to the Board. Such a regulation would prevent the possibility of any insane patient being long unnecessarily confined. A report or summary of the practice in every asylum, both private and public, ought to be published annually by the Medical Board.

All the acts of the physicians and civil engineers ought to be done in public, except the visits of the physicians to the insane patients.

The business of the civil engineer will be, to examine whatever relates to the buildings, to the accounts, and to the domestic economy of the establishment.

That, at the first attack of the disease, the patient ought to be sent to an asylum, or privately put under proper restraint and suitable treatment, in order to prevent the disease from becoming incurable from injury done to the structure of the brain.

In the higher classes of society, as well as among the poor, the insane are frequently detained at home, in consequence of the fears, the ignorance, and the prejudices of their relations, and sometimes from the self-interest of the medical attendant, until the disease, from morbid organization, becomes incurable.

Your petitioner humbly submits to the consideration of parliament, whether or not a much larger fine ought to be imposed upon the rich, than what is now imposed, by the existing law, upon the overseers of the poor, who neglect to put their relations and friends under such restraint and medical treatment, as is essential for their safety and recovery. Your petitioner is, from ample experience, convinced that, after curing the bodily disease, incident upon the first attack of insanity, nothing contributes more towards removing the mental alienation, than employment suited to the circumstances and habits of the patient. The method of verifying this observation will be, to compare the number of patients cured in mad-houses, placed under similar circumstances, where employment is extensively used, and where no recourse is had to it.

Your petitioner, therefore, most humbly prays, that your Honourable House will adopt the measures herein suggested, or such other measures as may appear to your wisdom most efficacious, to secure to the insane judicious and humane treatment during confinement, and the most speedy restoration to their friends; and your petitioner will ever pray.

Caleb Crowther, M.D.

SIR CHARLES BELL'S VIEWS.

To the Editor of the Medical Gazette.

Sir,

It is an extraordinary assertion of S. in the last number of the Medical Gazette, that S. Y., in the preceding number of that journal, "presents not a single circumstance which can be construed into a fact;" while he makes no attempt whatever to disprove the statement of facts, of which the short paper of S. Y. wholly consists; namely, that Sir Charles Bell adduces no proof whatever of any particular connexion between the middle column of the spinal marrow and the muscles of respiration, and that there is no set of muscles exclusively employed in respiration.

S., by reminding the reader, that Sir Charles Bell's doctrine does not wholly consist "in the opinions which he has delivered about the nerves of respiration," and making no reply to the foregoing statements, which, if correct, must invalidate all he says on this subject, virtually acknowledges the impossibility of defending it. How far it forms an essential part of his system, those acquainted with it will judge.

My knowledge of Sir Charles Bell's opinions is not derived alone from the summary in your journal, although, as appears from what is said in the number of that journal for the 8th instant, that summary is written by Sir Charles Bell himself, and therefore must be a correct account of his opinions.

With regard to the subject being so "summarily dismissed" by S. Y., if it appear that the foundation on which the opinions rest cannot be maintained, an examination of them in detail is evidently superfluous.

Let us see on what foundation the other parts of his system rest. S., in his reply, says,—"Before can know accurately the peculiar kind of motion, or kind of sensation, which is enjoyed by

one nerve in contrast with another, or solve the question why this nerve should be connected in the particular manner which we find that it is with others, it is necessary that we be perfectly acquainted with the nature of the actions performed by the muscles, to which it is distributed, or with the peculiar sensibilities of the part."

The foundation, on which all that part of his system, referred to in this quotation, rests, is, that the sympathy of parts depends on the connexion of their nerves. By what facts is this position established? It will be found, that all the facts on the subject are in opposition to it; whereas they must be such as not to admit of any other explanation in order to establish it.

The phenomena of sympathy, so far from depending on the connexion of nerves, are often most feeble where the connexion of nerves is greatest, and strongest, where no connexion of nerves whatever can be traced. It is even well known, that we still continue to refer sensations to limbs that are lost, at whatever part the amputation is performed. The whole of the phenomena evince that the cause of the sympathy of parts exists in the central parts of the nervous system; and that, as far as relates to it, tracing the connexion of nerves is altogether labour lost. If S. wishes to support that part of Sir Charles Bell's system, to which I now refer, he must simply state the facts which contradict what I maintain to be a fact; namely, that Sir Charles Bell adduces no proof whatever that the sympathy of parts depends on any connexion of their nerves,—a doctrine which was admitted only at a time when our knowledge of the animal economy was extremely crude. If he cannot adduce such facts, although he fill a volume with observations, they will be of no avail. Now, if Sir Charles Bell's system be deprived of its respiratory doctrine, and the influence of the connexion of nerves in determining the sympathies of the animal economy; how much of it will remain? I believe I may reply, in the words of my first letter, which you declined publishing. * * * *—I am, sir,

Your obedient servant,

S. Y.

[The same reasons which induced us to decline publishing the first letter, prevent us from inserting the reiteration of it, which follows in the MS. of our correspondent; and we beg to add, that, unless the parties choose to come forward in their own names, the controversy must here cease.—Ed. Gaz.]

MEDICAL GAZETTE.

Saturday, March 22, 1834.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

CATASTROPHE OF THE "ONE FACULTY" PROJECT.

Our readers will be not a little amused to hear of the denouement of the notable reforming project broached in the Westminster Medical Society some months ago. It will be recollected, that a ridiculous resolution, about the propriety of establishing a single Faculty in this country, or expedient by which all branches of the healing art were to be rendered one and indivisible — was moved by Dr. James Johnson, and seconded by Dr. Sigmond. After some discussion of the question, it was thrown out, but was once more brought on the tapis under the pretext of an informality in the mode of taking the ballot. The "one faculty" men now rallied round their leader, and carried the measure by a successful *ruse*. Well, days and weeks —nay, months, have elapsed since the final ballot, and no petition was forthcoming (we thought it fairly defunct) till Saturday night last, when, with all the benefit of the matured experience of the learned committee, forth was brought, and read to the society, this document of great expectation. But, alas! for the "one faculty" men—if any there now be, for they "made no sign" on this occasion — there was not one word about the pet project in the petition, all hopes of the medical millenium hav-

ing evidently come to an end; and, what is most curious, not a murmur was expressed on the occurrence of so lamentable a catastrophe. Nay, this is not all. The said petition obtained an abundant meed of applause for its concocters, on the ground of the *discretion* they displayed in avoiding all notice of the "faculty" project. And who, thinks the reader, was most conspicuous in thus crying down the "one faculty?" Who was most remarkable in commending the omission of the silly scheme? Why, who but he who proposed it,—supported it in every possible way, twice balloted for it,—and staked the last shred of his character for consistency upon it?—he it was who seconded the motion of thanks to the committee for their very proper conduct in omitting all mention of the scheme. So much for the *requiescat* of the one faculty.

And now, let us make a few remarks on the circumstances. We see, in the fate of this foolish project, which has vanished into "thin air," the *prestige* of the ultra or destructive reformers in medicine. A little bustling, meddling party, in a medical society, sets itself up to suggest remedies for the arrangement and governance of the whole profession: a couple of advocates are thrust forward as spokesmen: these persons do not understand the *nostrum* which they have to propose, but they do their best to mystify the members who attend the ordinary meetings; and they succeed to a certain extent, by preaching up the expediency of equal rights and equal rank, for all who profess and call themselves medical men. But this was all very well, within the little scene of action, where the thing was got up. As soon as the rumour, however, reached the ears of the more intelligent part of the profession, it was no longer suffered; it was put down as a nuisance. What course, then, did the faculty advocates pursue? They had wit enough to perceive the strong set of the current, and so take the best measures they could to eschew the danger. Their petition, which was to contain their *nostrum*—their panacea for all the ills that physic is supposed to labour under—was suffered to lie by, till the drug should perhaps become palatable, if possible. But nobody would look upon it—nobody would have any thing to do with it till the nauseous part was removed; and this being the case, the unhappy advocates were obliged, bitter as it was, to swallow their own pill; they had no alternative. The petition lay all this time in abeyance, and was at last brought out in its expurgated and more endurable condition,—*minus* the unfortunate clause.

It is unnecessary for us to remind our readers of the opinions of various correspondents, so strongly expressed in the pages of this journal, concerning the one faculty project. Since we took in hand the exposure of this folly, we have had the satisfaction of finding that we had the concurrence and express approbation of all whose opinions were worth having; and it would be idle not to presume, that such sentiments had their proper weight even with our ill-judging and ill-fated ultra reformers. But there was another cause that co-operated for their discomfiture. They found themselves left to their fate by one of their greatest patrons. The coryphœus who interpreted their plan for them, after his own approved fashion, and who first affixed to the term "one faculty," a meaning not to be misunderstood, finding that the thing would not answer, left his deluded followers as usual in the lurch. He hoped, of course, to be able to make a stand for his own "collegium"—the outward and visible sign of the "one faculty;" but it was too

plain that nothing could come of nothing; so he abandoned the speculation, and by way of diversion, or as a *dernier ressort*, took up the advocacy of a "tripartite" affair.

This, too, as it appears, having failed to procure admirers, and matters having become desperate with him, we have recently been amused with the announcement of the *indelicacy* (indelicacy proscribed in such a quarter!)—the indelicacy, no less, of agitating measures of reform, while parliament is directing its attention to the subject!

But such is ever the career and the close of such ridiculous proceedings: the only wonder is, that deluded people can be found who suffer themselves to be hoodwinked and led by the nose wherever their dangerous guides choose to lead them. The contagion of the example of the Westminster Society—although that body can only be said to have lent itself to the discussion, and luckily escaped the consequences of adopting the measure—the example spread (in a solitary instance) to a manufacturing provincial town, and rashly were resolutions carried there, in favour of the Faculty folly. We hope what has just happened will serve as a lesson to the party in question, and to all those who put their faith in pretended but reckless reformers. They should have seen that the silly project of equality of rights and equality of rank, was at a discount even when they were most attracted by it: they now see—they must see—that it has fallen, never to rise again. Let this satisfy them as to the boasted power and influence of the radical levellers in medical reform.

By the way, we would ask what has become of that great aggregate meeting which was summoned to meet in London about the opening of parliament; and to which all the provincial medical reformers were to send their deputies, in order that the walls of St. Stephen's might be made to re-echo the "One Faculty" chimes?—But we forget: it is no longer *delicate* to talk about these things.

DEGREES FOR DISSENTERS.

We are glad to observe the symptoms of liberality which begin to shew themselves in the University of Cambridge. The petition from that quarter, presented this week to the Houses of Lords and Commons, is highly gratifying. It prays for the removal of the restrictions which prevent Dissenters from taking degrees in that University, and is signed by a large proportion of the resident members, including among them two heads of Colleges, and all the names at present connected with Cambridge that do honour to her by the lustre of their literary and scientific renown. Had we not long been familiarized to the obstinacy, or over-cautiousness, displayed at our great seats of learning, we should have been perfectly amazed at the repugnance which they have hitherto displayed to granting degrees without religious pledges. Do they dread to hazard the experiment? They have the example before them of a venerable sister, equally tenacious as themselves of the essentials of religion—the University of Dublin; yet they can scarcely point out any danger that has arisen from the important changes long since adopted by her. Dissenters may freely pursue their studies in Dublin, and take even the highest degrees there in arts, law, and medicine; to Roman Catholics themselves the Irish University has been open these forty years; and it is a fact worth adding, that such things actually take place under the Chancellorship of his Royal Highness the Duke of Cumberland.

COLLEGE OF PHYSICIANS.

The following note has been circulated, intended, we believe, as a reply to some observations recently made, on the College of Physicians, in the House of Peers:—

1. The College of Physieians grants its license to practise within its jurisdiction to any man who has obtained the degree of Doctor of Physie in any University upon earth, after a residence of two years; and who, upon examination, proves his competeney. This license enables him to receive the ordinary emoluments of physieians—makes him eligible to all public institutions—to become a lecturer and teaeher at the great medieal sehools—and to hold the high offices of physieian to their Majesties and the Royal Family.

2. The College of Physieians, however, having thus done justiee to individuals seeking to praetise as physicians within their jurisdietion, has thought itself at liberty to provide for the honour of the profession, by offering some indueement to those who are about to enter it, to obtain that previous edueation, which, in England, has always been esteemed the highest and the best: and the inducement consists in admitting, by preference, the Graduates of Oxford and Cambridge to the Fellowship of the College.

3. The Fellow of the College has no advantage whatever over the Licentiate, with referenee to the publie. He differs from the Lieentiate only in belonging to the governing body of the College; and in this eapaeity he has eertain duties to perform, and holds in rotation eertain offiees. Of these offices, those of President, four Censors, Treasurer, Registrar, and four Lecturers, reeeive emoluments. The emolument of the President is 25*l.* per annum; of each Censor, 20*l.* per annum; of the Treasurer, 25*l.* per annum; of the Registrar, 40*l.* per annum; of the four Lecturers, the two juniors receive 10*l.* eaeh; the third, 20*l.*; and the senior, 32*l.*

4. But although the College has held forth the little honour and profit of the Fellowship as an indueement to those who become physieians to obtain the previous edueation of an English University, it has eleeted into the Fellowship from time to time, and eontinues to elect, eminent individuals from among the Licentiates.

WESTMINSTER MEDICAL SOCIETY.

(From a Correspondent.)

The fifth act of that laughable entertainment, at the Theatre in Great Windmill-Street, entitled "the One Faculty seheme," or, "the Petition to Parliament," was performed on Saturday evening last. The house was but thinly attended, several of the principal actors being absent; but the performanee, on the whole went off with great *eclat*. Before indulging our readers, however, with the denouement of the pieee, we must recal to their recollection the most striking ineidents which have marked its chequered progress hitherto.

The performance began (it will be reeollected) on Saturday, Nov. 23, 1833, with a flourish of trumpets; after which, Dr. James Somerville pourtrayed the blessings of the "one faculty scheme," with a felieity of language, and an energy of aetion, never suffieiently to be admired. "All whieh it behoved the Soeiety to do," he said, "was to petition parliament for the assimilation of the whole profession into one great medical faculty. Physicians, surgeons, and apotheearies, should all sit together in one faculty. The profession would thus become an united body, having one hall, one museum, one library, and one eommunity of sentiment! The profession should not even trouble parliament to frame laws for their internal management, but merely require the appointment of a faculty upon a sound basis. Genius would then be disburthened of the impeding weight of grievous monopolies, and would shed around itself, and the whole cirele of society, a truly brilliant and invaluable light*."—*(Great applause, and another flourish of trumpets.)*

The second act exhibited Dr. James Johnson advoeating the eause of the "one faculty" scheme, and proposing resolution No. 8, which deelared that the grand panaeea for all the evils under which the profession had groaned, and was still groaning, was "the eonstitution of one faeulty, or academy, of medicine." An ingenious contrivance for giving interest to the drama was de-

* See Lancet, No. 535, pages 363 and 364.

vised by Dr. Gregory; and with this the second act closed.

When the curtain drew up for the third act, on Saturday, December 14, the performers were all seen preparing for a grand ballot, by which the fate of the one faculty scheme was to be decided. Dr. Gregory's amendment was negatived, and the faculty scheme thrown out by a large majority! End of act third.

The fourth act introduced a new performer upon the stage, in the person of Dr. Epps, who, availing himself of an irregularity happily discovered in the preceding portion of the drama, again summoned the attendant spirits from the vasty deep, and commanded them to enact over again the imposing ceremony of the ballot. The audience, breathless with impatience, witnessed, as in *Der Freischutz*, the casting and counting of the balls; and now the one faculty scheme was triumphant!! What was injurious to the profession on the 14th December, was found to be highly favourable to it on Saturday January 4th, when the curtain fell, and the fourth act terminated.

On Saturday last, as we have stated, the curtain again rose, and discovered Dr. Copland in the chair. After apologizing for the great length of time which had elapsed since the last performance, he proceeded to read the petition to the legislature, which, in accordance with the previous resolutions, the committee had with great care and diligence prepared. What will be the surprise of our readers when we inform them, that in this petition not one word appears about the "one faculty" scheme; not one line hints at an amalgamation of the several orders of practitioners. The community of hall, of museum, of library, and of sentiment, is no where adverted to. Instead of praying for the constitution of one faculty, or academy, of medicine, the society pray that parliament will, in its wisdom, see fit to appoint *a governing body, or council*, for the general guidance and regulation of the profession, leaving it in doubt whether that governing body may not be best constituted of persons wholly unconnected with the medical profession.

The best part of the joke, however, is still to come. A Mr. Costello, who had been one of the most strenuous supporters of the "one faculty scheme" in the early part of the drama, moved a vote of thanks to the committee, for the admirable manner in which they had drawn up the petition, and especially for the singular felicity with which they had avoided all debateable points.

This resolution of approval and of thanks was seconded by — Dr. James Johnson. Start not, gentle reader; it was even so—by Dr. James Johnson himself, the professor of consistency. The drama then ended, as all well-conducted five-act comedies should end, by all parties shaking hands; and the curtain fell precisely at ten o'clock, amid the plaudits of the audience.

Are the members of this once-respectable society aware, that by these tergiversations they are making themselves very ridiculous in the eyes of the profession, and of that large portion of the public who are ever on the watch for matter of amusement?

MEDICO-CHIRURGICAL SOCIETY.

Dr. M. Hall on the Cure of Nævus.

To the Editor of the Medical Gazette.

Sir,

I beg to reply, in a very few lines, to the observations contained in your note of my paper, read before the Medico-Chirurgical Society on Tuesday evening, March the 11th.

First, I beg to say that the reporter is wrong, in stating that I propose to use a *couching needle*. This observation gives an erroneous idea of the mode of cure which I do propose, and of the extent to which it may be applied. The kind of instrument I recommend is actually represented in the plate which accompanies my paper, and therefore there should have been no such mistake.

* * * * *

I am, sir,
Your obedient servant,
Marshall Hall.

[Dr. Hall finds fault with our reporter for calling the instrument which he recommends a *couching needle*. The gentleman who wrote the report is still at a loss for any better mode of describing the instrument; and was induced to call it so, because *such is the identical name given*

to it by Dr. Hall himself, in his paper on the subject in this journal*. As to the remainder of the preceding letter, consisting of replies to the observations of Mr. Lloyd, Mr. Stanley, and Dr. Locock, we do not think it would be quite fair towards these gentlemen, to give Dr. Hall the advantage of studied replies to their oral remarks. Dr. Hall ought to have been on the spot, to answer the objections made to his paper.—Ed. Gaz.]

CURIOUS CASES OF SUICIDE.

Dr. Heyfelder, in a tract on self-murder lately published, gives an account of several curious attempts made by persons on their own lives. Among them is the case of a woman, who tried to accomplish her purpose by the application of 200 leeches; also of another, who exposed herself to swarms of bees; and an apothecary beat in his own brains with a pestle. But one of the most original modes of suicide among them is the following:—A builder, who was chagrined by the treatment he received from his employers, resolved to put himself to death. He wrote a letter, expressing his determination, and then hurried to a steep part of the high road, where vehicles of all sorts were obliged to put on a drag in the descent. Here he waited till a heavily-loaded waggon reached the spot, when, with the fury of a maniac, he seized hold of one of the wheels that was not locked, and, applying his body to the circumferenee, was presently crushed and ground as under a mill-stone. —*Medicinische Zeitung.*

LAMENTABLE ACCIDENT.

M. Bennati, whose late researches on the physiology of the human voice gained him so much reputation, lost his life a few days ago in Paris. He was run over by a restive horse as he was walking on the Boulevards, and suffered such severe injury (fracture of the skull, with violent concussion), that he died in twelve hours. He was buried with great pomp in the cemetery of Montmartre, and orations were pronounced over his remains by M. Julia de Fontenelles, in the name of one of the learned societies, and by M. Davel, on the part of his countrymen. M. Bennati was a native of Mantua, and but 36 years of age, when his career was so unfortunately suspended.

DISORDERLY FRENCH PUPILS.

M. Orfila has been obliged to suspend his lectures at the Ecole de Médecine, in consequence of the disorderly conduct of some of the students attending his class. We have not heard any reasonable cause assigned for this disturbance.

LITERARY INTELLIGENCE.

Preparing for publication, in one volume 12mo., A Dissecting Manual, containing a description of the Bones, Muscles, Vessels, Nerves, Absorbents, and Viscera, of the Body; together with their relative Anatomy, more particularly as relates to the Arteries. By Richard Partridge, Esq., junior Professor of Anatomy at King's College, London.

NEW MEDICAL WORKS.

Hippopathology: a Systematic Treatise on the Disorders and Lamenesses of the Horse, with their modern and most approved Methods of Cure. By W. Percivall. Vol. I. (to be completed in 3 vols.) 10s. 6d. bds.

Preparing for Publication.

The Surgical and Descriptive Anatomy of the Bones, Ligaments, and Joints. By W. H. Thomas, M.R.C.S. London.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *March* 18, 1834.

Abscess	1	Heart, diseased	2
Age and Debility	29	Hooping-Cough	7
Apoplexy	4	Inflammation	46
Asthma	9	Bowels & Stomach	4
Cancer	1	Brain	3
Childbirth	4	Lungs and Pleura	4
Consumption	62	Insanity	3
Convulsions	28	Jaundice	1
Croup	1	Liver, diseased	5
Dentition or Teething	4	Measles	5
Dropsy	5	Mortification	6
Dropsy on the Brain	15	Paralysis	1
Erysipelas	1	Small-Pox	5
Fever	4	Spasms	1
Fever, Scarlet	11	Unknown Causes	10
Fever, Typhus	2		
Gout	1	Stillborn	22

Decrease of Burials, as compared with the preceding week . . . 9

METEOROLOGICAL JOURNAL.

(Not come to hand.)

* See vol. vii. page 677, column 2, last line.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 29, 1834.

LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY;

Delivered at the London Hospital,

By Francis H. Ramsbotham, M.D.

Lecture XXV.

LABOUR.

DUTIES OF THE MEDICAL ATTENDANT UNDER NATURAL LABOUR.

We resume our consideration, then, of the duties to be attended to after the birth of the infant.

Tying the funis.—Drawing the child a little way from the mother's body, and exposing it to view (this is the first, and indeed the only part, of our duty which requires to be performed by aid of the eye), we proceed to put two ligatures on the cord, for the purpose of closing the vessels; and we then separate the child from the mother. The ligatures that we employ in London, consist of eight or ten pieces of thread, a skein of which is generally in readiness for our use. We should select a sufficient number to make the ligature of a proper thickness, and form a knot at each end; and this should be done previously to the child being born. I do not know that this particular sort of compress possesses much superiority over tape or string; however, it is the custom to employ it, and there is no reason why we should not. Bobbin is bad, because it is more likely to slip off the funis; tape is better than bobbin, and is recommended, in preference, by some; but I have known tape slip also. The thread ligature is less liable to lose its hold than any other, and in that respect it may possess some small advantage.

Even in forming the ligature a little attention is necessary. It must be of a certain thickness; if it be too thick it does not sufficiently compress the arteries, and it is liable to lose its hold after the funis is divided; if, on the contrary, it be too thin, only consisting of two or three threads, it will probably cut through the membranes covering the cord—the amnion and chorion—as well as the coats of the vessels, and cause bleeding. It is also necessary that the threads should be all of one length; for if one or two be shorter than the others, they alone will make any pressure, and consequently act as if the ligature were composed of them only. I have known hæmorrhage, to a great extent, take place, and much danger induced, by want of attention to this simple caution.

The first ligature is to be applied about three fingers' breadth, or a couple of inches, from the navel, to be drawn tight, and tied in a single knot; the funis must then be surrounded a second time in the same crease, and a double knot made upon it.

For the sake both of cleanliness and safety, we place a second ligature upon the funis: *cleanliness*, for if we were to cut the cord beyond the ligature, without having secured the placental end, the blood contained in the umbilical vein and the placental mass would be squeezed out, and run perhaps upon the floor, or on our own clothes. But particularly we should do this for the sake of *safety;* because it frequently happens that there are twins in utero; and it also will occasionally happen,—though I grant but very seldom,—that the two circulations (the one of the child in utero, and the one of that which has been born), anastomose in the placenta; in fact, instead of there being two single separate placentæ, the organ is double, and belongs to both children; so that the blood of each circulates in the

body of the other reciprocally; and if the severed vessels are left unprotected, it is possible that the unborn child might bleed to death through the divided funis of the one already in the world. The application of a second ligature is but a trifling complication of our duty; it takes up but little time, and is attended with no trouble. We should place it about the same distance from the first, as the first is from the body of the child, and make a double knot as before. It is as well, before this ligature is tied, to squeeze as much of the blood as we can, out of the intervening space, up towards the placenta, lest, at the moment the funis is cut, some part of it should be projected on our dress.

Division of the funis.—We divide the funis with a pair of blunt-pointed scissors; and thus prevent the possibility of the extremities of the blades injuring the child. To protect the infant further, the thumb and third finger of the left hand must embrace one portion of the funis—being placed over the ligature which is nearest to the child's body—while the other ligature is held between the first and second fingers of the same hand; and the section must be made between them by one cut. If one portion of the funis only be held, while the division is being made, it is not impossible that one of the child's fingers or toes might be amputated at the same time, an accident which would be of most serious import, and an instance of which Dr. Merriman mentions having known; nay, Dr. Denman, in his lectures, used to relate an instance of the penis being cut off by a drowsy, negligent practitioner; which case, indeed, he hints at in his published system, although he there does not mention any particulars. It will be impossible for an accident of this kind to happen, if we secure the child's body in the manner recommended; for should it throw a limb into the very jaws of the scissors, at the moment we are about to close them, we shall feel the stroke upon our hand, and be conscious of the chance of injury.

There is danger in placing the first ligature close to the umbilicus of the child, lest we should include a portion of intestine protruded into the cord—an occurrence by no means rare—and lest the compress should not be tight enough to prevent hæmorrhage; in which case we have no space left to apply another ligature upon: and there is danger in dividing the funis too near the first-made ligature, lest it should slip away from its hold, and the vessels be no longer protected. These are the reasons that have induced me to give you the foregoing instructions. The old woman's notion, formerly prevalent, that a *peculiar advantage* would accrue to the individual, to whose person a long portion of funis was left attached on its division, is disproved by the authority of de Graaf—if authority were required—in his observation, "*Ineptum est illud obstetricum proverbium futurum penem majorem, si vasa umbilicalia non proximè ad umbilicum ligantur.*" We cannot but feel astonished that such a man as De Graaf should have thought it necessary, deliberately and gravely, to refute such a sentiment. Hippocrates lays it down as a rule,—not that we should think of quoting him as an obstetrical authority, but his remark is valuable as indicative of the practice in his day,—that the child should not be separated from the mother until it had either passed urine, sneezed, or cried aloud; or, in other words, until strong assurance was observed of its having assumed some of the functions belonging to breathing life. Denman recommends that we should not separate the child, and consequently not put a ligature on the funis until after the circulation through the umbilical vessels has ceased. Of the two recommendations, that by Hippocrates is by far the best. There is no necessity to wait until the umbilical vessels have ceased to pulsate; because the same changes will take place in the arterial system of the child, whether the circulation in the funis is interrupted rapidly, or whether it occurs more slowly, and by degrees; and the infant can derive no benefit from a continuance of the circulation through the cord after it has breathed freely, nor indeed after the placenta is separated from its uterine attachment. Denman tells us, "in the course of ten or twenty minutes, or sometimes longer," the pulsation in the funis has entirely ceased.—I am inclined to think it would generally be considerably longer; but this is mere speculation, as I have no experience on the subject; for I never delay the application of the ligature until the pulsation has ceased spontaneously. It appears to me, indeed, by such a practice we should be unnecessarily keeping the child in a very awkward, not to say dangerous situation, and subjecting the mother also to considerable additional inconvenience. The rule I lay down for my own guidance is nearly that directed by Hippocrates. I seldom or never put the ligature around the funis until the child has cried, or given some other unequivocal evidence of the proper change having taken place in the function of the lungs; unless indeed it be still-born, and I am desirous of using the warm bath, and other resuscitating means, as speedily as possible. Let us wait till breathing is established; but let us not adopt Denman's recommendation

of allowing the child to remain attached, until the pulsation in the umbilical arteries can no longer be observed.

Disposal of the child.—On the child being separated, it is deposited in what is called a *receiver*,—a piece of flannel, which is generally fashioned into a square shape,—and ornamented around its edge with lace, satin, ribbon, or some other such lady-like thing,—in the centre of which a thin napkin is usually sewn. This is mostly held by some near relation, (if any be present,) who is desirous to be the first to welcome the long-expected stranger into life. Having, then, handed the infant to its temporary guardian, we have done with it for the present. We may observe, that it is usually bundled up into a round ball by its new protectress, and every part of its person most carefully enveloped in the wrapper. I need not point out the danger of such a practice. I was once witness to the death of an infant, from over-anxiety to prevent its taking cold. The mouth and nose were perfectly stopped by a thick fold of flannel, so that it was literally smothered; and when I had assured myself of the mother's safety, and turned my attention to the child, I found it rolled up in this manner, on the aunt's knee, and quite dead. It is right, if there is any awkwardness displayed by the person who receives the child, to give a particular caution that the mouth and nostrils may be kept uncovered, so that they may have free access to the external air: the other parts of the body may be wrapped up as closely and as warmly as circumstances render necessary or desirable.

Suspended animation. — Resuscitation. — When the child does not breathe immediately on its birth, it is sometimes difficult to ascertain whether it is actually dead, or its animation is only for a time suspended. Animation may be suspended by many causes: immoderate loss of blood, sustained by the mother, as well as pressure on the head, or on the funis umbilicalis, will produce the effect; but it more frequently results from the latter than either of the former causes. This pressure may be the consequence of the funis falling down by the side of the head; or of the gravid uterus, by its action, squeezing it between its own parietes and the child's body. Whenever, then, a child does not attempt to breathe soon after it is born, we should endeavour to ascertain whether it is really dead, or whether animation is only suspended for the moment. This may usually be known by placing the hand over the region of the heart; and if there be the least tremulous pulsation observed, it is a sure indication that the child is not dead. A newly-born infant is exceedingly tenacious of life, and many children have been recovered, by the use of proper means, who would inevitably have perished under less careful management. Often, too, a state of deep stupor, owing to the compression the brain has suffered during the passage of the head, prevails for a little after birth, which, unless removed, might terminate in death; for, while it lasts, the nervous system is not susceptible of those impressions necessary to induce the first act of breathing life. The child may, then, frequently be roused by two or three smart slaps on the buttocks, back, and chest; and, on its being awakened from its lethargic state, a sob will be drawn; this will end in a cry, and respiration will be established. This simple expedient will of itself often be found sufficient, without the employment of any other resuscitating measures.

Should this, however, fail to excite the first respiratory effort — provided the heart's action be too feeble to propel the blood through the navel-string—the separation should be effected as speedily as possible, and the child entirely immersed in a warm-bath. Whenever we are attendant upon a case of lingering labour, or one complicated with hæmorrhage, or any other accident after which it is probable that the infant may be born with impaired vitality, it is right that we should have in readiness a small tub, or pan, with a sufficient supply of hot and cold water, that a bath of proper temperature may be made instantly. We shall frequently find that the stimulus of warmth applied to the skin, will excite the respiratory organs. The temperature should be 97° or 98°. But if, after a few minutes, the child does not gasp, and we observe that the heart is acting less forcibly than before the bath was had recourse to, its continuance in the warm water will do harm both negatively and positively;—in a negative manner, because it prevents our calling to our aid other most efficacious means; and positively, because the warmth—when the powers are reduced to a certain point of depression from some particular causes—seems to act injuriously on the nervous system; for it has been proved experimentally, both, I believe, by the late Dr. Haighton and Sir Anthony Carlisle, that many animals will drown much quicker in warm than in cold water. If this be granted, it is probable that a corresponding injurious effect may be produced on the body of an infant under the peculiar state of asphyxia we are now considering. The next means to be used, then, is artificial inflation of the lungs; by which we keep up, for a time at least, the heart's action.

A hot flannel, or blanket, must be prepared; the child should be taken out of

the bath; the surface rapidly wiped as dry as possible; a bit of clean flannel should be placed over its face; the nostrils may be squeezed together with the thumb and finger; and we should blow into its mouth with our own, alternately inflating the lungs and depressing the chest. The flannel is merely useful for the sake of cleanliness; it is by no means absolutely necessary, but it does no harm, and it is as well that something should be interposed between the child's mouth and our own. Some practitioners recommend that we should always be furnished with a tracheal pipe, by which the lungs may be more perfectly inflated than with the mouth alone. The only objection which can be made to the use of a pipe is the difficulty in its introduction through the rima glottidis, and the consequent loss of much important time. It is much more apt to pass into the œsophagus than the trachea, and embarrass the operator: if, however, he has acquired a certain degree of dexterity in its introduction, and can employ it without delay, the lungs are much more likely to be efficiently filled by its aid than without it. For myself, I have often restored newly-born children in the manner I have recommended; for although some air will certainly pass through the œsophagus and distend the stomach, still a large quantity will also find its way into the lungs; and although the abdomen, therefore, becomes somewhat tumid, that does not interfere with the proper descent of the diaphragm, nor produce more than momentary inconvenience; and certainly is not to be put in competition with the chance of restoration that the process of inflation affords.

Provided, however, still the child does not breathe naturally, while the heart continues to act, as we often find the case, we may then rub a little spirit on its chest, and back, and shoulders; and we may irritate the glottis also, by letting a drop or two of spirit fall on it from the tip of our finger. This will often produce a convulsive sob, which may be the commencement of the respiratory process. These are all useful means;—immersion in warm water, inflation of the lungs, rubbing the body all over with a little spirit, and placing a drop of spirit on the root of the tongue, or epiglottis. Our efforts must be kept up with perseverance, while there is the least quivering motion perceptible along the cardiac region; for it is proved, beyond a question, that in many animals the heart has been kept in action, by inflation of the lungs, long after death had unequivocally taken place. Thus Le Gallois, a celebrated French physiologist, kept up the heart's action in rabbits for many minutes, and even some hours, after he had taken off the head—the vessels having been previously secured—by alternately inflating and compressing the lungs; and Mr. Brodie has shewn that in small animals artificial respiration will support the circulation of the blood for some time after the heads of the animals had been actually cut off. Thus he corroborates the statement of Le Gallois. These experiments disprove the assertion of Bichât, which he maintained, apparently on theoretical grounds only, that this operation can never restore circulation that has once ceased; but is effectual only in those instances where the heart still pulsates, but propels mere venous blood. Hence, however unpromising the case may be, it is our duty, whenever there is the least indication of the heart not being completely at rest, to use the most vigorous means for the purpose of restoring its full powers.

Examination of the uterus.— Presuming, however, as is usually the case, that there is no necessity for using any means to resuscitate the infant, having seen it disposed of carefully, we lose no time in ascertaining the state of the uterus, in reference to the mother's safety. This is done by passing the right hand between the thighs of the patient, as she lies still on her left side, and examining it through the abdominal parietes. By this simple means we acquire a great deal of knowledge. In the first place, we ascertain whether there is another child, and that is of great importance; and after having been some time in practice, and gained a certain degree of tact, we ascertain, secondly, whether the placenta is in the uterus, or has passed into the vagina—two states differing materially from each other, both with regard to the practice we are called on to adopt, and also the immediate safety of the woman.

If the uterus contain another child, its fundus will be felt high up above the umbilicus, and its general bulk almost as large as it was before the expulsion of the first. We shall be able to define it distinctly; it will present that peculiar elasticity, and that degree of subdued fluctuation, which is so characteristic of the gravid uterus. As it is not my intention at present to enter into the consideration of twin cases, I shall suppose that there is no other child in utero; and we shall proceed to consider the states in which the uterus may now be found.

Condition of the uterus immediately after delivery.—There are, then, five conditions in which we may find the womb. *First*, it may be as hard and as small almost as a fœtal head, so that we can grasp its body, and it feels almost as solid as a cricket-ball under our hand. *Secondly*, it may be almost as small as a fœtal head, but softer, so that when we press it, it *gives* under our

hand, and has somewhat of a doughy feel. *Thirdly*, it may be almost as small as a fœtal head, and one minute it will be hard and the next soft—the hard state alternating with the soft. *Fourthly*, it may be almost as large as an adult head, and so hard that we can perfectly define it with the hand; it feels like a large, solid tumor. And, *fifthly*, it may be as large as an adult head, and soft, its general volume not so easily defined, possessing also a doughy feel, and when grasped, it becomes harder in substance, and less in bulk.

The three first states prove to us at once that the placenta has wholly, or almost wholly, passed into the vaginal cavity, and the two last indicate that it is still in utero; the fourth proves that the uterus is contracted around the mass; and the fifth shews that it has not yet taken on itself the office of contraction, for the purpose of expelling it. Of all these states immediately after the child is disposed of, we generally find the last the most prevalent —namely, where the uterus has not yet contracted to expel it; but where it is more than probable that in a few minutes it will begin to protrude it into the vagina. The woman cannot be considered in a secure state so long as the placenta is retained in the uterus; nor is she to be looked upon as positively safe, unless the first of these varieties obtain,—unless the uterus is as small as a fœtal head, and so hard, that we can make no impression upon it by our grasp. We may then conclude that the patient is secure from flooding, at any rate for the present, and that the placenta is entirely excluded: but this rarely happens immediately after the birth of the fœtus; on the contrary, we generally find it large and soft, containing the placenta still within it, and not yet contracted, but most probably soon about to contract.

Internal examination.—After this examination externally, to make assurance doubly sure, we may pass our finger into the vagina, and up to the os uteri. Twisting the funis umbilicalis, then, around the first two fingers of the left hand, and bringing it to its bearing, we pass the first finger of the right hand, previously anointed, into the vagina, as in a common examination. If the placenta be entirely in utero, which I have just said is most commonly the case, immediately after the child's expulsion, we shall either not be capable of touching it at all, or if it be within reach, we shall only be able to detect a very small portion of it; we may just feel it offering itself at the os uteri, but we cannot surround its volume, nor can we probably discover the insertion of the funis.

Removal of the placenta.—There is no part of natural labour which requires so much judgment as the conduct of the third stage; for the slightest mismanagement of the placenta may be productive of most serious mischief, by converting a perfectly natural into a most dangerous and complicated case. As long, then, as the placenta remains in utero, so long we must wait, within a certain limit,—provided there be no flooding,—for those contractions which are to expel it from the uterine to the vaginal cavity. The length of time which it is desirable for us to wait will be particularly specified when we come to treat of the retention of this mass.

Before quitting our post at the patient's bed-side, her person must be made as comfortable as circumstances will permit, by the removal of all the wet and soiled napkins, and the application of two or three others, warm and dry, to the hips and vulva. This duty is sometimes left to the nurse's management; but it is much better, on many accounts, that it should be undertaken by the medical attendant himself, and not delegated to any other party.

We must not, then, be solicitous and anxious about getting the placenta away soon—we must not sit down by the bed-side and keep constantly jerking and twitching the funis; there must be no hauling or pulling at it, no *teasing* of this kind; but we must let the mass remain quietly *in utero*, unless there be a necessity for its removal. The most usual (and perhaps I might say the only) necessity, is either the lapse of time, or the appearance of excessive sanguineous discharge.

While, then, the placenta has not descended into the vagina at all, but is still entirely embraced by the uterine parietes, and out of the reach of the finger, we may make some little grasping pressure on the uterine tumor, which will facilitate contraction, and perhaps expedite the expulsion of the mass. This pressure must not be such as to give pain, but only a comfortable support and a sensation of security. Having withdrawn from the bed-side, and paid some little regard to the arrangement of our own dress, we may address some words of consolation and congratulation to the patient; make our observations on the pulse; and request another blanket may be thrown over her, to prevent any rigor or chilly feeling which may supervene on the violent perspiration she has suffered.

Stimulants not to be exhibited.—In some countries, and in parts of this kingdom, it is the custom to give the patient a tolerably strong stimulant or cordial, consisting of a glass of warm wine or spirit and water, immediately after the child's birth: and the advocates of this practice reason in this way:—The process of labour, they say, is one attended with great debility; it produces great exhaustion, even under the most favourable state; the sys-

tem, therefore, requires extraordinary means to preserve its average balance. They further deduce arguments from observations made on other animals, and draw an analogy between the human species and the *graminivora*. If we were to offer to a graminivorous animal any thing containing blood for food, under ordinary circumstances, with what horror would she turn away from it; but when a cow or sheep has brought forth her young, she tears the funis with her teeth, and greedily swallows the after-birth. For what object can this be? It is not for the sake of cleanliness that she does it; it is not to hide the marks of her having brought forth young; because we know that all animals, in a state of nature, conduct themselves as though they were proud of the circumstance. The common hen, after she has laid an egg, cackles and struts about, and holds her head much higher than before; and the same feeling, we believe, pervades the breast of every creature that has sensation. The instinct must be given her, then, for her own sake;—she must devour the after-birth because she requires something extraordinary to support her. Now it is further argued, that what the fleshy after-birth is to a graminivorous animal, a spirituous cordial is to a woman; and that, therefore, we should follow the dictates of nature, as exemplified in the instance of the lower animals. The idea is ingenious, the premises may be correct, and the reasoning may be logical; but, most decidedly, the practice is likely to be injurious. In this part of England it is not the custom to give stimulants generally after labour; so far from it, we order a perfect abstinence from any thing of the kind;—and this direction results from observations founded upon at least as rational deduction as the opposite practice. The system of the patient immediately after labour is rather to be considered under a state of excitement than of depression; and as this excitement must be increased by the exhibition of any stimulus, it will necessarily add to the exhaustion suffered, when its immediate effects have gone off. Unless, then, there be some particular indication for a stimulating draught, it must be looked upon as both unnecessary and injurious. We may give her any mucilaginous or diluent drink, if she be inclined to take it—not warmer, however, than the temperature of the body;—and we may assure her, unless there be a contra-indicating symptom, that so far she is safe for the present.

The nurse should be required to devote herself entirely to her mistress until after the placenta has passed, because her services may be necessary. She need not, then, immediately proceed to wash and dress the child; there can be no harm in allowing it to remain wrapped in a warm flannel, moderately near the fire, for half an hour, or even an hour, before the operation of washing is gone through.

With regard to the child being placed near the fire, I may remark, that although it is desirable to keep it in a certain degree of warmth, especial care must be taken to protect the eyes from the glare of a great light. It is too much the practice to make up a blazing fire, and laying the infant on the knee, to carry it as close as can be borne by the attendant. This sudden intromission of light on the delicate retina, and application of heat to the globe itself, is likely to be highly injurious: and such a practice, much more frequently than either cold or acrid discharges, is the cause of the purulent ophthalmia of infancy, which is sometimes so very dangerous to the structure of the eye, and always so very troublesome to cure.

We may employ ourselves, then, in the patient's room for five or ten minutes, if we choose, or we may withdraw into another; but we must on no account leave the house until after the placenta is removed; and we must not be many minutes together absent from her side, lest a sudden attack of hæmorrhage should occur, and only be detected on the supervention of syncope. Our time may be advantageously occupied in looking to the child's safety, and particularly in assuring ourselves of the security of the umbilical vessels.

While we are thus watching, we shall most likely be informed of the return of uterine action, by the woman complaining of two or three comparatively trifling pains affecting the back and loins. As it is probable that under these pains the placenta may have somewhat descended, another examination may then be made per vaginam, to assure ourselves on this point. Our subsequent conduct must be regulated entirely by the situation in which the placenta may be found. I have already said, that so long as the mass remains perfectly out of the reach of the finger, so long it is completely included within the uterus, and so long no attempt must be made to remove it by traction on the funis. But although we may be positive, if we cannot feel it, that it has not yet descended into the vaginal cavity, we are not equally certain, if we can detect a portion of it, that it is wholly excluded from the uterus; because part of the edge may appear externally to the os uteri, while the great mass remains within. Neither must we feel satisfied that it is lying loose in the vagina, even although we may be able to detect the insertion of the funis easily, as is generally

taught and believed, because the placenta may be of a battledore formation; and although the root of the cord may be quite within reach, and the division of its vessels perfectly and clearly discernible, yet the principal bulk may be still in utero, and perhaps morbidly adherent to the uterine surface; under which state, if we were to make any forcible attempts to remove it, by pulling at the cord, we must necessarily, and inevitably, produce mischief, and shall probably place our patient's life in imminent hazard.

Before we can assure ourselves that the placenta is totally excluded from the uterine, and resting in the vaginal cavity, we must be able not only to feel its substance distinctly,—not only clearly to detect the insertion of the cord into its structure, but we must also be able to surround it entirely by the finger, so as to encompass its principal bulk.

The formation of a correct diagnosis with regard to the state in which the placenta may be placed at this period of the labour, is of more importance than any other point in the management of a natural case; for, as soon as it has quite descended into the vagina, it may be removed at pleasure by simple traction on the cord; but, so long as the whole, or any large portion of the mass, is retained in utero, so long it must be allowed to remain, until either lapse of time, or dangerous hæmorrhage, prompt its removal; and should it be found requisite to extract it from the uterus, the agency of the funis must by no means be relied on, but other measures must be adopted, to be hereafter particularly detailed.

By some, indeed, we are recommended not to remove the placenta even from the vagina, but to wait for its natural extrusion by the muscular powers of that organ, under the belief that its continued residence in the canal will stimulate the uterus to more perfect and complete contraction, and thereby further the prevention of hæmorrhage. I can neither coincide with this sentiment, nor agree with the practice; because, as I have already informed you, the vagina having been inordinately distended by the head of the child, its fibres will sometimes not recover sufficient tone to contract effectually on the mass for the lapse of some hours; during the whole of which time the patient's mind is kept in a most anxious state, inducing perhaps serious distress; since all women are well aware that they cannot be pronounced safe until, at any rate, the after-birth is removed. Again, so far from considering the continuance of the placenta in the vaginal cavity likely to prevent an immoderate loss of blood, I cannot help thinking that its tendency would be exactly the reverse; for, supposing there was a small quantity of blood more than usual poured out by the uterine vessels,—if the vagina be free and unoccupied, it will escape externally,—give an opportunity for the uterus to contract, and its flow will be both evident to the woman's sensations, and perceptible to the attendants, on an inquiry being instituted: sufficient time will, therefore, be afforded for employing means to ensure perfect and permanent contraction of the organ. If, on the contrary, the same disposition existed, while the placenta occupied the vagina, by filling up the cavity it would act as a plug, prevent the escape of the blood externally, and cause an accumulation in the uterus: that accumulation will distend the uterine parietes; and, in the same degree as the distention takes place, will the vessels be enlarged, and their apertures opened; they will, therefore, be pouring out their contained blood in a geometrically increasing ratio, in proportion as the volume of the uterus becomes expanded. A greater quantity of blood is thus lost in a shorter space of time, and the effect is consequently the more dangerous. Besides, the blood being pent up within the uterine cavity, there is no external evidence of the danger that is stealing onward; and the patient might possibly flood to death before it was even discovered that bleeding was going on.

No harm can arise from withdrawing the placenta carefully from the vagina, by gentle traction on the cord, when it is entirely under the command of the finger, introduced as before recommended; but the greatest possible mischief may be produced by attempts to remove it in the same manner, before the mass can be clearly, distinctly, and perceptibly defined.

The removal of the placenta from the vagina is very easily effected. Twisting the funis umbilicalis two or three times around the first and second finger of the right hand, we draw down in a line tending towards the coccyx, and receive the placenta in the left, placed under the perineum; or we may introduce the two fingers and the thumb of the left hand into the vagina, embrace the mass between them, squeeze it as we would a sponge, and slowly extract it.

It is not only necessary that we should remove the placenta, but the whole of the membranes also, if possible. Some practitioners are careless about the membranes, their whole attention being directed to getting away the placenta; but unless some management be used, the delicate fœtal involucra are often torn—pieces are left in the uterus, and give rise to many

evils—the least of which, perhaps, is the alarm likely to be induced by a portion being protruded through the external parts in the shape of a thread, or offering itself across the vulva, like a smooth glistening tumor, retaining behind it a quantity of fluid and coagulated blood, some hours after the termination of the labour.

Another distressing evil likely to arise from the same cause, is the accession of violent after-pains, induced by the irritation the presence of a portion of the membranes occasions; and a third, still more dangerous, is fever of a typhoid type, originating in the absorption of the putrid fluids, which are entangled in their folds. All these serious inconveniences may be prevented by a careful removal of the membranes.

To obviate the chance of their being torn, some recommend that, as soon as the placenta has passed through the os externum, it should be twisted round two or three times, in such a manner as to bring them away like a cord. This is scarcely necessary; all that is required being that we should draw them forth slowly, or carefully work them out with our fingers, if there be any difficulty in their removal.

The placenta and membranes being perfectly freed, we require a basin or some other receptacle to deposit them in, which, for the sake of decency, we cover with a cloth, and again apply the hand over the uterine tumor, to ascertain that the organ is still in a contracted state, and that no bleeding is going on into its cavity. Having perfectly satisfied ourselves on this point, we may a second time remove the napkins soiled with the accumulated discharges, and envelop the lower part of the patient's person in others that are warm and dry. Three will be sufficient: one must be partially slid under the left hip; another may be placed over and around the right hip; and a third carried between the thighs, directly on the vulva. After the patient has been thus made as comfortable as circumstances admit of, the state of the uterus must be again inquired into, by the hand externally applied, before we withdraw from the chamber; and if no relaxation in its parietes has occurred, no increase in its volume, nor any distention of its cavity,—while, at the same time, there is no sanguineous discharge externally,—we may pronounce her safe for the present from the chance of hæmorrhage, and, if other symptoms correspond, in as favourable a state as could be hoped for.

ON THE

CROWING INSPIRATION OF CHILDREN.

To the Editor of the Medical Gazette.

Sir,

I had read with great interest Dr. Ley's "Observations on the Crowing Inspiration of Children," which lately appeared in successive numbers of the Medical Gazette, when the occurrence of a fatal instance of that disease in my own family led me to give them a careful re-perusal. The result is, I am induced to send you my child's case, and also two other cases, which do not, however, tend to support Dr. Ley's view of the nature of the complaint—namely, that it arises from pressure on the par vagum nerve, or its recurrent branch, produced by enlargement of the bronchial or other glands in the tract of these nerves.

Case I.—Basil R. was born Oct. 4, 1833, a very vigorous babe. Four hours after birth, he was suddenly taken with convulsions, in which he continued twenty hours: that is to say, he was at no time during that period so free from them as to be able to swallow; and attempts to feed him produced a recurrence of the convulsive action, and apparently complete suffocation, which went off by violent sobbing. In the first two hours of the attack, he was repeatedly thought by my friend Mr. Wilson, and the other bystanders, to be dead. At one time he was three minutes, by that gentleman's watch, without respiring, when he gave a convulsive sob, and again relapsed, for a briefer interval, into the same inanimate state; by and by the breathing became natural. It was during the second night of his life that the fits entirely subsided. On the following morning he swallowed some cream and water, and from that hour till the 14th of February, when he was nineteen weeks old, his health was not only excellent and uninterrupted, but remarkably vigorous, and his mind perhaps rather too rapidly developed. Very early he distinguished his mother and the nurse from others; and a considerable time before he attained the age I have mentioned, he was in the habit of amusing himself with his little sisters, by pulling their hair when they presented their heads to him for that purpose, and also by screaming, and other expressions of

pleasure, on seeing them play about him. In body he was tall, and held his head erect earlier than most children. When placed on his feet, he was able to bear his own weight.

On Friday morning, (14th February), when he awoke from sleep, it was noticed that there was a degree of spasmodic affection of the hands and feet; the fingers being drawn at an obtuse angle with the palm; the thumb lodging upon the palm, and the foot being drawn towards the shin. This continued, more or less, with slight crowing on awaking from sleep, till between twelve and one o'clock the next day, when he had what the nurse called a fit; in which he continued only two or three minutes. It commenced with repeated crowing, followed by rigidity of the limbs, and a degree of twitching about the mouth. When I saw him, after the lapse of a very few minutes, he stared and took no notice. In ten minutes or so he was himself again. As the face was somewhat flushed, a leech was applied to the forehead; also a grain of calomel was given, followed by doses of castor-oil, which purged the bowels freely. On the day following he was quite merry, and apparently in all respects well. There was an itchy eruption on the scalp, which teased him a great deal; and as it was thought he was beginning to teeth, the gums were freely divided over the lower front incisors.

On the ensuing Friday (February 21st) the same symptoms came on as in the preceding attack; and on the succeeding day also he had another fit, similar to the former. In the afternoon, two leeches were applied to the forehead, as a precautionary measure merely; for there was neither flushing, stupor, nor any degree of heaviness. However, during the night he was very restless, and on Sunday morning had another fit, but very slight, according to the nurse. His health and spirits appeared good, and continued so during the week. Again, on the morning of Friday, February 28th, he awoke with crowing, and the same spasmodic affection of the hands and feet. On examining the gums, one front tooth was found through, —its fellow nearly so; and as the two lateral incisors of the same jaw were also advancing in the gum, the scarificator was freely used. He appeared cheerful and well, only the contraction of the hands and feet continued. On Monday, March 3d, he was seen in the evening by my friend Mr. Wilson; for I was now becoming uneasy at finding that he crowed not only on awaking, but at other times, and particularly when laughing; and also on account of the, in general, contracted state of the hands and feet. Mr. Wilson directed a warm bath, and remained while the nurse undressed him; when the little fellow smiled so brightly, and appeared so plump and vigorous, that my kind friend could not help laughing to see that he had got so stout and lively a patient; remarking, nevertheless, that he disliked the continuance of the crowing. On Tuesday, as the itching of the scalp was very troublesome, a poultice was applied to the head in the night. I now pointed out to Mr. Wilson, that the *glandulæ concatenatæ*, on the right side of the neck (the same side as that on which the eruption of the scalp chiefly was), were perceptibly enlarged. This I should not have noticed, had I not been recently reading Dr. Ley's papers. On Wednesday morning his eyes were clear and animated, the bowels regular, and the motions perfectly natural: for two or three days previously, he had been taking small doses of rhubarb and soda, as recommended by Dr. Ley. About four in the afternoon, his mother gave him the breast, and nursed him for some time; at which period he was lively and playful: she thought him quite as well as she had seen him of late. At five o'clock, while on the nurse's knee, smiling at one of the servants who was talking to him, he began crowing loudly, became black in the face, and by the time I got to the nursery, which was little more than one minute, he was pulseless, and shewed no sign of life, except a slight twisting of the mouth. He appeared to me to die as if he had been strangled with a cord, only much more quickly.

Examination of the body.—Twenty-one hours after death, the body was examined by Messrs. Wilson and Fawdington, the dissection being carefully, and, I need not say, skilfully, conducted by the latter. Our chief object was to examine the glands in the neck, and at the bifurcation of the trachea. On the right side, an absorbent gland, situated behind the angle of the jaw, was enlarged to about the size of a small field bean; and one or two others, between the posterior belly of the di-

gastricus and submaxillary gland, had attained the same size. The par vagum and recurrent nerves were patiently traced, and the state of the bronchial glands was minutely inspected; but every thing wore the aspect of perfect health: there were no glandular swellings which could be supposed to interfere with the functions of the nerves of the larynx. The body was well nourished, and the muscles of the throat unusually strong, for so young a child. I ought to remark that the jugular veins were greatly distended, as appears in asphyxia. The brain was not inspected, there having been no symptoms indicating head affection.

Case II.—C. W. æt. 13 months, had generally enjoyed very good health. During the last summer he had been affected with hooping-cough; and, from the commencement of dentition, occasionally with diarrhœa. From the period of his getting rid of the hooping-cough, he had shown symptoms of the complaint which ultimately carried him off, (on awaking from sleep, during paroxysms of crying, &c.) manifested by crowing and difficult breathing, which however immediately went off, on his being shaken, or having his position changed. Up to Christmas-day last, these attacks had been of this slight description. On that morning the attack was of such a lengthened and severe character that he actually appeared to be dead for a minute or two; but, after shaking him, animation returned. Immediately he fell into a profound sleep, which lasted an hour, when he awoke as well as ever. Between that period and the 3d of January he had three similar fits; the last proved fatal. There was little or no convulsive action in the final attack: death appeared to arise from the abrupt cessation of the act of breathing. In the intervals of the fits he had always seemed very well, and was exceedingly lively. On one occasion it was noticed that the thumb of one hand was slightly drawn to the palm, and that, when removed, it immediately returned thither. He had cut six incisor teeth: the gums were not distended, but they were lanced, as a matter of precaution. There was not the slightest appearance of enlarged glands in the neck; the head was largely developed. Though stout and well-proportioned, he had not commenced walking. During the last week of his life his bowels were in perfect order. The foregoing is the case of the son of a highly-intelligent professional friend, whose notes I have chiefly copied. A very few days before the fatal attack, to which he alludes, I paid a visit to the infant, and was struck with his fine lively appearance, which certainly indicated any thing rather than early death.

Case III.—The last case I shall give is one now under treatment,—a male infant, aged 11 months; and one, like each of the preceding, a specimen of vigour and robustness. Some time in the last week in January, when he had cut four teeth, it was for the first time noticed that he crowed in a singular and distressing manner, when he awoke from sleep; so much so, that the nurse was induced to lift and shake him. The same crowing has occurred daily ever since, whenever he awakes from sleep; on all such occasions he requires to be lifted and shaken. A fortnight ago, according to the report of the nurse, he was taken with a fit: he was sitting on her knee in bed, when, in a moment, he twisted his body, and became stiff. On looking at him she says he frothed at the mouth, but was not convulsed in his limbs: his face was almost black. This fit continued for a couple of minutes, and immediately after he was quite lively. On Saturday last (March 15) he had three similar attacks, each continuing for about the same length of time; the last had apparently nearly extinguished life. After the most careful and repeated examination, I can discover no enlarged glands in the neck, or elsewhere. The gums are full in several places, and have been freely scarified. The stools are occasionally rather too pale; but, upon the whole, the bowels are only a little deranged. In the way of precaution, two leeches were applied to the forehead.

If these cases appear to you worthy of being made public, they are at your service. Dr. Ley's views are unquestionably ingenious; but a much wider induction of facts will be required to establish his chief positions. I would ask, may it not be *coincidence* when there are enlarged glands and crowing in the same child, seeing that there are instances of enlarged glands without crowing, and of crowing without enlarged glands? Further, is it probable that in a soft, yielding structure, like

the throat, absorbent glands should, by pressure on the par vagum and recurrent nerves, cause a diminution of nervous energy "varying in its degree, according to the extent of compression, from mere defective susceptibility and muscular activity, up to the complete extinction of nervous influence in the state of complete paralysis?" If Dr. Ley can furnish examples of parallel effects on the nerves, from mere enlargement of absorbent glands in other parts of the body, they will be highly instructive, and tend to establish his views. I admit that this is a subject of great interest. Abscess in the neighbourhood of the larynx, masses of suppurating glands in the neck, such as appear after scarlatina, and the like, often in childhood occasion croupy breathing (not, however, periodic, but continued), and sometimes sudden death. The pathology of this region, indeed, notwithstanding what has been written upon it of late years, is very far from being an exhausted theme, or likely to be so in the present generation of observers.

Yours respectfully,

JOHN ROBERTON.

Manchester, March 17, 1834.

THE

DEPENDENCE OF THE MOTIONS OF THE IRIS UPON THE RETINA,

Attempted to be established by the Anatomy.

BY JOHN THURNAM, LONDON.

To no one, perhaps, is a minute knowledge of anatomy more essential than to him who attempts to reason upon the physiology of any part of the body; and in no case, probably, has this importance been more fully exemplified than in one of the greatest discoveries, in this branch of science, of the present age;—I allude to that of Sir Charles Bell, of the compound nature of the spinal nerves; to which he was at first led by the mere anatomy, as may be seen by reference to a little work published by him nearly twenty years ago, entitled "An Idea of a New Anatomy of the Brain." It would be matter for serious regret, in case of any of the results, obtained by this distinguished investigator from experiment conducted in so careful and legitimate a mode, becoming the subject of criticism, were such criticism allowed to shake the general credence in these doctrines, should it be found deficient in this grand necessary preliminary—an accurate knowledge of the anatomy.

These remarks are intended as an introduction to some observations upon a paper by Mr. Walker, upon the Relation existing between the Iris and Palpebræ, which appeared in the London Medical Gazette, No. 327, and which had been preceded by another from the pen of the same gentleman, read before the Manchester Literary and Philosophical Society, and which has been published in a separate form. In these papers, the author's object has been, to establish a new theory of the physiology of the iris, viz. "that its sympathies and relations are with the palpebræ, and not with the retina, as is generally taught and believed." I consider that in pointing out, more forcibly than perhaps has hitherto been done, the striking sympathy which exists between the iris and palpebræ, he has conferred a benefit upon physiology, but I by no means can assent to the latter part of the proposition,—that the iris does not sympathize with the retina; nor even to the explanation which he has offered of the former. My objections to both are based upon the anatomy, which I conceive will not bear out our author in his theory. My observations will therefore be confined to those parts of his papers which bear upon the structure of the parts, more particularly of the nerves.

In our author's theory the ophthalmic ganglion is made to play a very important part—that of regulating the motions of the iris on the one hand, and on the other of associating these with corresponding ones of the palpebræ. The twofold arrangement of the fibres of the iris he regards as corresponding—the circular with the orbicular, and the radiating with the levator muscle of the palpebræ. This analogy will not perhaps be denied: I cannot, however, admit the existence of any further analogy, or that the analogous muscles of the "external" and "internal eyelids," the palpebræ and iris, are placed under the control of the same nerves; in other words, that the third nerve governs the motions of the levator palpebræ and of the radiating fibres of the iris, whilst the contractions of the orbicularis palpebrarum, and of the circular fibres of the iris, are both regulated by the *fifth nerve*.

I will first advert to the ophthalmic

ganglion. In the above view of the subject, where is the necessity for a ganglion at all, if it merely possess the properties of the nerves by which it is represented as being formed? But that it really is formed by these nerves, cannot now, I think, be for a moment allowed. Bichât, in his Anatomie Générale, long ago pointed out that the ophthalmic ganglion, with the ciliary nerves, forms a distinct centre and system of nerves belonging to the grand ganglial system, or, to use his own language, "the system of nerves of organic life."

That this really is the case, a reference to dissection will, I think, at any time establish. In a late dissection, I was engaged in verifying these facts. The ophthalmic ganglion possesses none of the sensible qualities of the nerves with which it is connected, and from which it is said to be formed; on the contrary, it has the usual characters of the ganglia of the sympathetic system, viz. an irregularly ovoid shape and a beautiful pearl-like, semi-translucent hue. These characteristics of the ganglion to a certain extent belong also to the ciliary nerves arising from it, as well as to the long and delicate filament connecting the ganglion to the nasal branch of the fifth, and in a less obvious and more doubtful way, to the short and stunted one connecting it to the inferior oblique branch of the third nerve.

I know not that I can express the deductions to be drawn from this statement of the anatomy better than in the same words that I made use of in my note-book, when I recorded this dissection. "It would hence appear that those anatomists are correct who describe these filaments as proceeding *from* the ganglion to the two cerebral nerves with which it is connected, and as a sequitur, with respect to the physiology of the ganglion, that it does not possess the properties of a mere compound nerve, deriving its sentient properties from the fifth and its motor from the third nerve, but that it exerts a perfectly independent influence over the iris, in accordance with the condition of the retina, through the medium of the ciliary nerves, to which it is a nervous centre, as much as the spinal cord, with its cranial prolongation, is a centre to the symmetrical system of the cerebro-spinal nerves."

But in addition to the ciliary nerves passing to the iris, as stated in every anatomical work, Tiedemann has shown that some of them ramify in the substance of the retina*, and thus an evident explanation of the dependence of the iris upon the retina is obtained. This I ventured to adduce in a commentary on Dr. Arnold's description of the otic ganglion, which, with an abridgment of that paper, appeared in a contemporary journal.

But the most objectionable part of our author's theory, is the idea of the branches of the fifth nerve, which supply the orbit and forehead, being compound nerves, ministering to *motion* as well as to sensation. Can any one, tracing the origin of the fifth nerve from the cranial prolongation of the spinal cord, by two roots—one small, and anterior from the motor; the other large, and posterior from the sentient or posterior column—emerging through the lateral peduncles of the cerebellum (superficial surface of the pons varolii); the posterior root, as in the case of the spinal nerves, forming a ganglion, which gives off three branches; the two first of which, the ophthalmic and superior maxillary, pass forward without a single filament derived from the anterior root, whilst the remaining branch of the ganglion unites with the whole anterior root, and together form a compound nerve, precisely analogous to the spinal nerves, the inferior maxillary; can any one, I would ask, seeing this, for a moment admit that the ophthalmic, or superior maxillary divisions of this ganglion, possess any motor quality, unless at the same time he is willing to give up, or rather to call in question, the idea of the distinct qualities of the anterior and posterior roots of the spinal nerves, as established by the researches of Bell, Magendie, Mayo, and others?

Having stated these, as I conceive, insuperable objections to our author's theory, I may perhaps just be allowed to offer a few observations upon the subject. With him, I regard the iris as an internal eye-lid; but conceive its motions to be perfectly involuntary, or automatic, and that they are regulated by the effects of the light upon the retina, conveyed to the ophthalmic ganglion through the medium of those branches of the ciliary nerves which ramify in the structure of the retina, and a corresponding action from the ganglion reflected along the ciliary nerves to the iris. Thus a provision is established for the protection of the delicate retina, which

* Zeitschrift für Physiologie, b. 1, h. 2.

cannot be influenced by neglect or fickleness on the part of its possessor, as might be the case did the provision belong to the animal functions. When, however, the afflux of light is very considerable, it is doubtless communicated to the sensorium, and the "outer eyelids," or palpebræ, become closed by the exercise of volition over the orbicularis palpebrarum, through the medium of the portio dura.

9, Gerrard-Street, Soho,
March 11, 1834.

STATE MEDICINE IN GERMANY.

To the Editor of the Medical Gazette.

Sir,

The following is an abstract of Professor Wagner's paper, to which I alluded in my letter of last week. It is considerably condensed from the original, but I think nothing material is omitted.—I am, sir,

Your obedient servant,
W. Cummin, M.D.

Great Russell-Street,
March 24, 1834.

Proceedings of the Practical School of State Medicine in the University of Berlin, *during the Summer Semester of* 1833. *By* Dr. Wagner, *Professor and Stadt-Physikus.*

The number of students who attended this course amounted to thirty-four; among whom were several doctors of physic and other licensed practitioners, most of them anxious to prepare themselves *practically* for the physicate examination. The number of cases submitted to us for medico-legal inquiry was 129, —almost every one of them adapted for the instruction of the class. Reports, written out and argued—some of them in much detail—were severally drawn up on those cases.

A good deal of other business also was allotted to the students: for example, they had the opportunity of opening many bodies which did not absolutely require forensic investigation; these were the bodies of suicides, drowned persons, and of individuals who had been poisoned with sulphuric acid, &c. The chemical research was conducted in the latter cases, as well as in some inquiries connected with medical police —the adulteration of articles of food and medicine, for instance — by Dr. Gusserow: to him, and to Mr. Baerwald, the apothecary, who favoured us with the use of his laboratory,—we have to acknowledge ourselves deeply indebted.

Of the 129 medico-legal cases, 113 related to living people, 15 to persons found dead, and there was one case of poisoning with arsenic. Of the investigations on the living, 94 were concerning bodily injuries or ailments, and 19 had reference to the state of the mind. Among the former, we were called upon to determine whether certain individuals, who were arrested for debt, were able to endure the severity of imprisonment?—whether others were fit to be brought up for trial, or to be removed from their homes? and whether certain persons were well enough to perform the duties of their respective offices? &c. Several of the alleged ailments in these cases turned out to be factitious—either altogether feigned, or whatever was really amiss was grossly aggravated: most of them were absurd complaints about chest affections, pains in the limbs, headaches, and piles. Where positive bodily injury had been inflicted, we were required to give our decision whether it came under that class denominated by the law injuries of a *grievous* nature, or whether (within the meaning of the criminal code) it involved a hazard of life, or was likely to entail a permanent mischief on the constitution or the limbs.

Among the remarkable cases of this kind which came before us, was the following one of *attempted abortion*. A young woman, seven months gone with child, had employed savine and other drugs, with a view to produce a miscarriage. As these had not the desired effect, a strong leather strap (the thong of a skate) was tightly bound round her body. This, too, availing nothing, her paramour (according to his own confession) knelt upon her, and compressed the abdomen with all his strength: yet neither did this effect the desired object. The man now trampled on the girl's person while she lay on her back; and as this also failed, he took a sharp-pointed pair of scissors and proceeded to perforate the uterus through the vagina. Much pain and hæmorrhage ensued, but did not last long. The woman's health did not suffer in the least, and pretty much about the regular time a

living child was brought into the world, without any marks of external injury upon it. It died, indeed, four days afterwards; but its death could not be traced to the violence inflicted on the mother's person: all the internal organs appeared normal and healthy.

Three cases of violation (*stuprum puellæ immaturæ*) were submitted to us. The subjects were children of from three to eleven years of age. Positive signs of actual violation could not be made out; but that the attempts had been made was quite clear. In one case, a venereal infection had been communicated.

In a couple of *divorce* cases, the husband was in one instance charged with having a venereal taint in his constitution, but it could not be proved; and in the other, the wife, who was already advanced in years, was ascertained to be unfit for one of the ends of matrimony, from peculiar malformation, or want of development of the sexual organs.

Among the cases which involved inquiries into the state of the *mental* faculties, fifteen were of a civil, and the other four of a criminal nature. The former related chiefly to the ability of managing property, and the removal of guardianship where recovery was alleged to have taken place. In one of these instances the individual was deaf and dumb. The criminal inquiries were concerning persons who had usurped nobility, resisted the lawful authorities, or committed homicide under circumstances which made it questionable whether they were responsible agents.

In our medico-legal examinations of the *dead*, we met with two cases, which had terminated fatally, in consequence of fractures of the skull, with extravasation of blood into the substance of the brain. In another instance, several injuries had been inflicted on the integuments of the head by a blunt instrument, but without any apparent mischief to the bones of the cranium. The parts got well in the course of a few weeks, and no disturbance of the intellectual faculties had been observed. But all of a sudden the patient became comatose, and died in a few days. On examining the cavity of the head, there was not only found a deposition of pus between the skull and the dura mater, but beneath the latter such a quantity of purulent fluid effused, that the left hemisphere was completely compressed by it, and reduced to an ash-coloured substance; but the right hemisphere and cerebellum were in a normal state.

In a child that had been run over and killed, the spleen and left kidney were crushed, and in consequence much blood had been effused into the abdomen and cellular substance about the kidney. No external injury, however, except a very slight excoriation, was observable on the body.

We met with but a single case of *infanticide*; yet that one served to afford us ample opportunity for examining the various tests employed in those investigations.

One of the students of the class lost his life through a wound received in dissection, whereby the great vessels of the forearm, near the elbow, were fatally injured.

Several questions were investigated relative to the causes and consequences of alleged lesions, and with a view to determine whether certain *wounds* had been absolutely, or only contingently, mortal. These inquiries involved many complicated considerations [a somewhat detailed account of which, Dr. W. here gives.]

We were also called upon medico-legally to examine a *human skeleton*, which was found in a tolerably perfect state in digging up the foundations of a building. It belonged to a male subject of about the age of fourteen. No injuries could be detected upon it. But the point to be ascertained, if possible, was—whether this skeleton had lain in the earth above twenty years or not, as this was material with reference to its affording the *corpus delicti* for a criminal proceeding. An accurate scrutiny of the state of the parts, with especial regard to the nature of the changes which subjects undergo when interred in different soils, gave us reason to infer that this skeleton had been buried perhaps about twelve or fifteen years in the spot where it was found.

The following case of *suicide* was remarkable. A criminal who had been shut up alone in a dark dungeon, when visited by his keeper not long after, was found lying dead on the floor. It was thought at first that he had had a fit of apoplexy. A vein was opened, and other means of recovering him were tried, but to no purpose. It was now for the first time noticed that he had a foreign body in his mouth; and, upon

examination, it proved to be a piece of woollen cloth, two ells long, and a quarter broad—a shawl, in fact—which the wretched man had thrust into his throat. Had this person been found dead under other circumstances, what reason would there not have been for suspecting that he had been murdered by a strange hand!

A case or two of malapraxis also came before us, particularly one in which, through the bad management of a midwife and an accoucheur, a woman had been allowed to sink after delivery, from uterine hæmorrhage.

And lastly, we investigated a solitary case of poisoning, in which a child had drunk from a cup that contained fly-poison (a preparation of arsenic.) Death ensued in twelve hours. But notwithstanding the most minute search of the intestinal canal and its contents, not a vestige of the deleterious substance could be detected. This was most probably owing to the very small quantity taken, and the evacuation effected by the vomiting.

MEASURES FOR A PROPER *FASHION* OF MEDICAL REFORM.

To the Editor of the Medical Gazette.

"Ridentem dicere verum
Quid vetat?" HOR.

VERILY, Mr. Editor, his Majesty has such "cunning workmen" at the head of his councils, that the whole community seems to bestir itself in cutting out a job for the exercise of their dexterity, either in mending or making, forming or reforming. In good sooth, I am, with many others, of the opinion, that our bodies, civil and political, are laid under great and lasting obligations to their talents, principles, and ingenuity; therefore, in the few remarks I am about to make, I must, *in limine*, protest against an inference which they may seem to justify, viz. that I hold our Whig ministry to be a set of tailors. *Procul à me esto.* Be this as it will, the fact is certain, that we, the body medical, feel that some of our institutions are grown old and unfashionable, threadbare, and well nigh worn out, according to the spirit and notions of our times: our cloth stands in need of reparation and renovation. But it would appear that our tastes differ respecting the changes to be effected, though it is expedient we should come to some general understanding on the particular "cut" or "fashion" likely to be most becoming, and to give us the best appearance as a body in the eyes of the world. Some, it seems, are for dressing us up in one complete suit, woven without seam throughout (*vide* the scheme of the "one faculty," whose unfitness you have so ably exposed.) This, I humbly submit, if agreed on and adopted, must infallibly put the members to much personal inconvenience and constraint. I do think, then, for one, that we had better adhere to the patterns of things as they are, whilst we admit such improvements as may be deemed more conformable to our increased intellectual growth and stature. First, with regard to our surtout, which must be, *par excellence*, the College of Physicians; it has evidently become too tight for wear; and if an alteration be not made, it is as evident that we are in danger of outgrowing it altogether. Here, then, we begin the work. Secondly, the line of demarcation between the College of Surgeons and the Apothecaries' Company is too open and distinct (like the piece of neutral ground we sometimes see between the upper and lower habiliments of an octogenarian, who contemns the modern mode of approximation.) Here we must modernize, bring them into nearer apposition, perhaps intimately unite them.

Should alterations, having these objects in view, be at length effected, I will not despair of seeing our body cutting a very respectable figure amongst its compeers; indeed, of beholding in it the dandy of an institution. But I beg leave to place my suggestions in aphoristic array, for the benefit of those who are occupied in taking measures for us.

1. The College of Surgeons and the Apothecaries' Company to be incorporated together.

2. Apprenticeships to be abolished.

3. A term of study not less than six years to be required. The age of admission to practice to be as at present, and the usual qualifications for examination demanded.

4. The College to consist of Fellows and Members. The title of Fellow to be an honorary distinction, conferred on superior talent by ballot.

5. The affairs to be managed by an

equal and limited number of Fellows and Members, who may be termed "the Directors," to be annually appointed in general convocation.

6. Any Director may propose a surgeon or general practitioner to be admitted to the Fellowship, to a limited number annually.

7. The diploma of foreign medical universities to entitle to examination. None to practice in England without the diploma of the College.

8. The diploma of the College to be sufficient to obtain an examination before the College of Physicians for the degree.

9. The College of Physicians to be enabled to grant degrees in medicine.

10. The rules 4 and 5 apply, and 6, substituting "a physician" for "a surgeon or general practitioner."

11. The libraries and museums of the respective Colleges to be free to all the members.

I remain, Mr. Editor,
Your's obediently,
A MEMBER.

Cranbourn, March 11, 1834.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Illustrations of the Botany and other Branches of the Natural History of the Himalayan Mountains, and of the Flora of Cashmere. By J. FORBES ROYLE. Parts I. and II. London, 1834. Parbury, Allen, & Co.

IN a former volume* we adverted to the causes which prevented or retarded the diffusion of a knowledge of the principles of the natural or Jussieuian arrangement of plants in Britain. The force and number of those causes of retardation may be tolerably well estimated by their effects—namely, the very few botanical works which have appeared in this country constructed according to these principles. The general want of acquaintance with the truly philosophic doctrines which form the basis of this method, hindered the first essays of those British botanists who adopted it being appreciated as they have since been acknowledged to deserve. Neither was it commonly perceived of how many other interesting and important subjects—especially of climatology, and other branches of natural history—botany, so treated, could be made illustrative. Even the writings of Humboldt had failed in gaining the number of converts and disciples which they are so admirably calculated to do, when they have not to contend with early and inveterate prejudice.

Though Jussieu's "Genera Plantarum" appeared in 1783, it was not till 1810 that the first work, in conformity with the principles therein set forth, was published. The appearance of the "Prodromus Floræ Novæ Hollandiæ," by Dr. Robert Brown, was the commencement of a new era in the botanical history of Britain. He not only adopted them, but strengthened and confirmed their soundness by his acute observations. Long, however, did this example stand without a single follower—another proof of the correctness of the remark, "that it is the privilege of genius to be in advance of the age, and to see, 'as by refraction, the light as yet below the horizon.'" The first application of the Jussieuian method to British plants was in Hooker's "Flora Scotica," in 1821; while Mr. David Don adopted it in the "Prodromus Floræ Nepalensis," in 1825. A botanist far removed from the direct influence of these examples, residing in a remote part of our Indian empire, from a perception of its excellence, has adopted it for the Flora of the Himalayan mountains, and neighbouring regions. Nature and truth never fail to win their way into the remotest places, though their progress is often delayed by our looking through the eyes of others rather than our own.

No situation was better suited than that occupied by Mr. Royle, for testing the accuracy of the principles of the natural method, and either increasing his faith in them, or destroying at once his attachment to it. The Garden of Saharumpore, which he superintended, is situated in lat. 30° north, 1000 miles north west of Calcutta, 1000 feet above the level of the sea, and nearly at the head of the extensive plain which forms the great Gangetic valley. Such was his point of divergence; and though he

* Med. Gaz. vol. xi. p. 151. Review of Lindley's Introduction to Botany.

has not visited in person (as who can?) all the provinces of our extensive Indian territory, by consulting the works which treat of other parts he gives us a preliminary view of the flora of India, extending over ten degrees of latitude, and twenty of longitude. The part upon which he more particularly dwells is the Himalayan range, from its first gentle ascent above the plains, to the loftiest spot producing herb or flower. The geographical position of this mighty range is very carefully given, and its geological characters are mentioned, as well as the meteorological phenomena of different portions, so far as ascertained,—a most important point to be known before we attempt to form any conclusions respecting the nature of the vegetation of a district. It is the first work of any magnitude published in this country, where the geological structure of the tracts examined has ever been fully given, as useful or essential to an accurate knowledge of the prevailing forms of vegetables. Dr. Mayeock's "Flora Barbadensis" set the praiseworthy example, and we are glad to see it followed.

The well-known rule of increasing altitude having a similar effect upon temperature as a higher latitude, or receding farther from the equator, is here applied, and ably illustrated. But certain peculiarities modify its application in this situation, in a very interesting and important way. We are thence led to conclude, that neither latitude nor altitude is sufficient to account for the distribution of plants, and hence the value of a knowledge of the isothermal lines. From page 5 we learn, that on the southern side of the Himalayan range there are two distinct seasons, two distinct climates, and, during these, an essentially different vegetation—one tropical, another temperate, or European. Hence on this favoured spot may be found, at one period of the year the crops of Britain, wheat, peas, and beans; at another rice, cotton, indigo, and maize. This affords great facilities for the acclimating of plants; accordingly, "in the garden at Saharumpore have been collected together in one place, and naturalized in the open air, the various fruit trees of different countries, as of India and China, Caubul, Europe, and America." This might have been done long prior to the present time, had the principles of the natural arrangement of plants, and a knowledge of botanical geography, to which it leads, been imparted to our medical officers before their departure from Britain for India. Our author repeatedly states, how much more may be done in this way; and we feel assured that he is right.

No more valuable or interesting kind of information is to be met with in this work, replete as it is with varied and important facts and inferences, than that relating to botanical geography, and the affinities of plants. In these departments it has greatly extended our *data*, and confirmed our previous opinions. For the particulars we must refer to the work itself, which no one can peruse without advantage, and great satisfaction. Much interesting information and many notices are given of the medicinal herbs now, or formerly, used by the Hindoo doctors; and very instructive disquisitions on some of the medicines employed by the Greek and Arabian physicians. The observations respecting the analogy of the flora of the Himalayan range, to that of the Altau mountains, and the plains of Europe, though novel, are convincing, and calculated to awaken our desire for more ample details, which will be furnished as the work proceeds. Nor should we omit to mention, that the forms of the animal kingdom which are found to accompany certain forms of the vegetable, are here duly noticed throughout their various classes of mammalia, birds, and insects.

So perfect do we regard this work in all its departments, that we are sensible of no desideratum, except that of the remaining portion of it, which, we trust, will speedily be laid before the public. The plates, in which frequently more plants than one are figured, are very beautifully executed and coloured. The geological sections of India must be more interesting to the geologist even, than the botanist, who will, however, know how to prize them.

The extensive but unexplored dominions which we hold in the East, must furnish ample materials for many similar works; and that we should be so late in being supplied with them, can only be accounted for from the circumstance, that the real nature and objects of botany not being understood, and the variety of ap-

plications of which it is capable, being unknown, the greater number of medical officers who proceed to India, are allowed to depart without the slightest knowledge of it, according even to the least eligible system. We trust better times are at hand, and that this work is only the forerunner of many of a similar kind. Should the author (who, we understand, is now in this country), after finishing his admirable Illustrations, return to India, to gather other richer and more varied treasures, we wish him, as he deserves, every success, and would greet him on his departure in the words of the poet—"*I decus, i nostrum*," *&c.*

The Hunterian Oration, delivered at the Royal College of Surgeons, on the 14th of February, 1834. By W. Lawrence, F.R.S. Surgeon to St. Bartholomew's Hospital.

We have before noticed this oration in general terms, as the most elegant in composition, and the most eloquent in point of delivery, which it had fallen to our lot to hear on any of those annual, and (perhaps unavoidably) rather commonplace, occasions. Its publication now enables us to give our readers a better idea of its merits, and as *analysis* is out of the question in such a case, we have selected some of Mr. Lawrence's vivid comparative sketches, in which the characters and peculiarities of some of the greatest ornaments of modern science appear to us to be very happily touched off. We can appreciate them as we might fine portraits of the individuals; but as these would require a master-hand to fix the traits which mark and distinguish the countenance, so those require a master-mind to seize and body forth the features of the intellect.

John Hunter.—"It has been a trite, but, I believe, most unfounded complaint, that genius is neglected, and that men of talent and information are precluded from opportunities of exertion and display by favouritism, monopoly, or other obstacles. Within my own experience, the difficulty has always been to find talent for the place, not opportunity for the talent. This, indeed, is natural; genius being rare, while fit occasions for its exercise are of constant occurrence. Genius will never be neglected by the public, unless it neglects itself: it must not disdain the humble alliance of industry: how can it expect encouragement, unless its existence be manifested by performances? The chemist can apply tests for latent heat, but what criterion is there for latent ability? The surest evidence of superior talent is, that it forces itself into notice in spite of adverse circumstances; that it makes a road where it finds none. Such, no doubt, would have been the case with John Hunter, even if he had not enjoyed the advantages already specified. He had that insatiable thirst for knowledge which is the surest mark of a master-mind; which, in such minds, supplies the want of external stimulus and opportunity. When we see him coming from the north, at the age of twenty, a raw uneducated youth, and entering into competition with well-trained and superior minds whom the prizes of a great metropolis never fail to attract, we must ascribe his brilliant success, not to his external advantages, which were certainly considerable, but to his superior mental endowments and the extraordinary industry with which he employed them; to that indefatigable industry, which would have brought distinction and fame to the possessor of even moderate talents. Consider the state of medical science when John Hunter appeared on the stage. There were giants on the earth in those days; Albinus, Haller, Camper, Dr. W. Hunter, Monro, Cullen, Pott, and the members of the French Academy of Surgery. Mr. Hunter was pre-eminent among such men. He appeared grand even when those around him were great.

"Some have lamented Mr. Hunter's deficient education, his ignorance of languages and books: I think unreasonably. From his brother, who was intimately versed in the literature of his profession, ancient and modern, and from other well-informed men, his contemporaries and fellow-labourers, he could learn in the easiest way all that had been done and thought in other times and countries. His whole life was spent in dissection, observation, experiment, and reflection: how could he have been better occupied? So precious are the fruits of his inquiries into all the actions and sufferings of organized beings, that we should not be willing to part

with the least of them for a whole load of scholastic erudition and book-learning.

"It is instructive to observe the course which Mr. Hunter pursued in his early studies, and which he followed throughout life with undeviating constancy. Without wasting time on the opinions of lecturers and writers, he resorted at once to nature; to the source from which the masters of our art have derived their knowledge, from which lecturers and writers must draw their information, unless they should be contented, as too often happens, with copying from others. Having reached London at the beginning of the anatomical season, he immediately entered the dissecting-room; and we find him in the following spring at Chelsea Hospital, with Cheselden. He would not take his knowledge at second-hand, but was determined to see with his own eyes, and to examine every thing for himself. He was incessantly occupied with the great volume of nature; appealing ever to those pure springs of knowledge which she pours out with unsparing hand at the bidding of her industrious worshippers. No one could have said with greater truth, *Juvat integros accedere fontes atque haurire.*"

Mr. Abernethy.—"The actions, the writings, and the conversation of Mr. Hunter, operated powerfully on a kindred genius among his own countrymen; I mean Mr. Abernethy, whose bust, by the greatest living sculptor, now appears in this theatre for the first time. The superiority of intellect that distinguished this great teacher, was shown in the very commencement of his career. He began to teach his profession at an age when others are occupied in learning it, that is, immediately on the expiration of his pupillage; a circumstance which, however honourable to his talents and acquirements, was not equally favourable to that slow process of mental culture, to that long course of observation and reflection so indispensably necessary for the solid improvement of surgery. His surgical and physiological essays, published at an early age, display an original turn of thinking and talent for observation, which have seldom been surpassed. He may justly claim the great merit of having excited and exemplified, by his writings and lectures, a more scientific investigation and treatment of surgical diseases. He learned from Mr. Hunter, of whom he was a devoted admirer, to bring the lights of physiology to bear on surgical practice. Hence he was one of the first in this country to vindicate the natural rank of surgery, as a branch of general pathology. He taught us to extend our views beyond the narrow limits of local causes and remedies; he pointed out the more general influences to which diseases of parts owe their origin, and hence he deduced the general means of treating those affections. He saw clearly that there is only one kind of pathology; that there is no distinction in source, nature, and treatment, between medical and surgical diseases; and consequently that surgeons ought to study general pathology and therapeutics. On this account he has been regarded as an intruder on the territory of physic; and has been accused of wishing to make surgeons physicians. If it is meant to charge him with wishing that we should add to our surgical knowledge that of medicine, the accusation is well founded, and does him great honour. By thus exciting surgeons to cultivate medical science generally, he has at the same time benefited the public, and increased the respectability of his own profession.

"Under some roughness of exterior, as regards manner, Mr. Abernethy possessed warm feelings, benevolent disposition, and a generous spirit. He freely bestowed professional and pecuniary assistance on the needy and deserving. He had remarkable quickness of perception and reasoning, and a lively fancy. Hence he did not always make sufficient allowance for dulness and ignorance; he was sometimes betrayed into impatience, and resorted too quickly to the use of wit, of which he possessed a large share. He always retained the complete command of this weapon, even in his angriest moods. * * * * * A great many anecdotes are still current in the profession, founded on curious dialogues, sharp sallies, and lively repartees, which occurred in his consultation room, or in other intercourse with his patients. The authority of some may be dubious; but I can assert, that he is justly entitled to the credit of all the best."

Desault. —"Mr. Hunter has been compared to the French surgeon, Desault. When Alexander the Great was

asked whether he would contend in the Olympic games, he said that he would, if kings were to be the competitors. In the spirit of that reply, I should decline, on the part of Mr. Hunter, any competition, except with a mind of the first class: it must be one pre-eminent in physiology and surgery. Desault certainly is not the man. We admire his enthusiasm, and his disinterested spirit. He possessed the current knowledge of his time, and was a good practical surgeon. Enjoying vast opportunities of observation, as surgeon to the Hôtel Dieu of Paris, he suggested those slighter improvements, which must have occurred under such circumstances even to an ordinary mind."

Pott.—"Desault might with more propriety be compared to Mr. Pott, who has always been justly regarded as one of the great modern improvers of surgery. His works, describing in clear and elegant language, and with sound judgment, the results of his own observation, are still read with pleasure and instruction. Although he was born thirty years before Desault, he is quite able to sustain competition with him, both in doctrine and practice.

"We cannot, however, as some have done, compare Pott to Hunter. The one improved the art; the other gave a new form to the science of surgery. The physiological principles of our profession, totally unknown to the one, were created, or at least brought to light, by the other."

Haller.—"Mr. Hunter may be compared, as a physiologist, to one of the greatest of his cotemporaries. Haller showed, from his earliest years, a fondness for study, and remarkable facility in the acquisition of languages. He became a prodigy of erudition. His mind was a vast storehouse of learning, ancient and modern. The labours and opinions of his predecessors, and of those who lived at the same time, were all known to him. He engaged zealously in the practical pursuit of anatomy and experimental physiology. His great physiological work contains a methodical and clear digest of all the known facts respecting the organization and functions of man and animals, and an accurate register of opinions and doctrines. It is indispensable to the philosophical student of medicine, as a work of reference; and its value is greatly enhanced by the candour, the impartiality, and the love of science, which animate every page. The example of Haller proves that Mr. Hunter lost nothing by the want of erudition, and that he had a great advantage in the wider scope of his researches, and in their important practical object. Haller confined himself to the healthy state of the body; Mr. Hunter embraced all the phenomena of life, both in health and disease, and thus arrived at physiological conclusions much clearer, and more satisfactory, than those of his great cotemporary, thereby illustrating the important truth, that no natural phenomena can be properly studied in an insulated manner: to be thoroughly understood, they must be viewed in connexion with all the surrounding parts of nature."

Cuvier.—"A man of powerful intellect, of unwearied research, and immense learning, has pursued, in a neighbouring country, the same course of investigation, that Mr. Hunter did in reference to the anatomy of animals. It was probably this coincidence of pursuit that led the college to do itself the honour of enrolling the name of Cuvier in the list of its associates, and to decorate its apartments with his bust. A German by birth and education, Cuvier chose France as the country of his residence. His genius and the immense services he has rendered to science will shed an imperishable lustre both on the land of his birth, and that of his adoption. * *

We cannot compare Hunter and Cuvier; their mental endowments, their acquirements, and the scope of their labours were so widely different. The former is the greatest of surgical physiologists: no one, in ancient or modern times, can approach to the latter as a philosophic naturalist. The annals of science afford only three who can be mentioned in competition with him—Aristotle, Linnæus, and Buffon. After the lapse of so many centuries, and in the imperfect state in which his works have descended to us, we have not the means of doing justice to the great genius of antiquity. We may however assert, without fear of contradiction, not only that Cuvier combined the separate excellencies of the two other naturalists,

but that in most respects he far surpassed them. He equalled Buffon in descriptive powers and in eloquence, but was never betrayed into the inaccuracies, the gratuitous hypotheses, and the bad taste, which sometimes disfigure the pages of that fascinating writer. Linnæus, with an active mind and true devotion to science, had the great merit of introducing something like order into the chaos, and of supplying naturalists with an intelligible nomenclature; but he had hardly a glimpse of those scientific principles, which pervade and illuminate the writings and the classifications of Cuvier. When shall we again see excellencies so numerous and various combined in one individual? The methodical spirit, the industry and ardour of Linnæus; the eloquence of Buffon; the learning, the candour, the impartiality of Haller; the all-comprehensive intellect of Aristotle! * * * *

"The gigantic intellect and immense acquirements of Cuvier, were adorned by a most amiable private character; while his lectures and public discourses, especially those addressed to younger audiences, were pervaded by an exalted tone of religious and moral feeling, which adds the last and highest ornament to literature and science. * * *

"In conclusion, gentlemen, let me express to you my conviction, that, as a physiologist and surgeon, John Hunter has had no equal in any age or country; —that he was one of those powerful minds, appearing only at long intervals, of which this island, small as it is, has produced so great a number;—that his name must be inscribed on that bright constellation of genius, which already bears those of Harvey and Sydenham—of Bacon, Locke, and Newton—of Shakspeare, Milton, Scott, and Byron. These gifted mortals, with kindred spirits, who have drawn inspiration from their example and works, shed over our land an intellectual glory, equal to its renown in arts and in arms. The bosom of every Englishman glows with an emotion of conscious pride at the enumeration of these revered names. If, gentlemen, the time should ever come, when the institutions and the power of our beloved country shall have passed away, their memory would linger round the spots consecrated by their earthly labours; the land on which they trod would still be a watchword to the earth; it would be peopled with the glorious recollections of its departed sages, as the sight of Greece recalled to the truly noble poet, who yielded up his life on her classic soil, the heroes who had fallen in her defence *."

Embryologie, ou Ovologie Humaine; contenant l'Histoire descriptive et iconographique de l'Œuf Humain. Par Alf. A. Velpeau, &c. *Quinze Planches.* Brussels, 1834. Dulau.

When this valuable work made its appearance in Paris last year, we noticed its contents pretty fully; and we were the first, we believe, in this country, to give any account of it. The controversy which at the time subsisted, relative to the structure of the placenta, rendered its presence opportune; and the opinions which the author gave concerning the several views entertained on the subject, were well calculated to raise him in the estimation of the lovers of impartiality. We admired the work of M. Velpeau, not only for its learning and ability, but for its beauty as a work of art; the plates we pronounced to be of great excellence. The edition to which we at present call the attention of our readers, is that of Brussels—just published—rivalling in every respect the original, if not surpassing it in some. The letter-press and paper appear to be superior to those of the Paris edition; the plates are at least equally good, and that is saying much for them; and the size of the work is the same—folio. Now when we add that, with all these advantages, the price of the Brussels edition is less than half that of the Parisian, we fancy we have said enough to recommend it to our British public. We shall be told, perhaps, that the Brussels *pirates* do not deserve this encouragement, and that their conduct is really most scandalous towards their French neighbours; but we decline entering on that question at present; at another time we shall probably state our views with regard to the extent to which we think French authors, and French booksellers, have reason to complain; meantime, we would not have our readers be too squeamish about enjoying the good things that the Belgian market affords.

* A quotation from Lord Byron follows, for which we regret that we cannot make room.—Reviewer.

MEDICAL GAZETTE.

Saturday, March 29, 1834.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

PARLIAMENTARY COMMITTEE.

It is well known to our readers that a Parliamentary Committee is now sitting, to which the eyes of the medical world are anxiously directed; and it is the earnest wish of all the respectable part of the profession, that the investigation should be conducted in the most free, and scrutinizing, but, at the same time, in the most liberal and impartial manner.

If any thing should occur to excite a suspicion, that the objects were other than those of arriving at the clearest judgment, unsullied by the bias of party—or that the means adopted were other than those which the most even-handed justice could approve—then would the confidence reposed in the tribunal be at once destroyed.

Should the impression unfortunately arise, that little men, of no weight among their brethren, and absolutely unknown to society, would be suffered to perk themselves up as authorities, and move, or affect to move, the strings by which the whole machinery is directed, —how unfavourable would be the effect upon the medical community!

If the by-standers should be at liberty to hand up questions which were forthwith put to the person giving evidence; —and should a committee-room of the House of Commons be converted into an arena, in which individuals were suffered to fight the battle of their private interests or their personal feelings; who would be sanguine enough to anticipate any public benefit from the result?

If a man, notorious—not to say infamous—as the systematic traducer and oft-convicted libeller of his profession, should be permitted to take a part in the proceedings, and to join in the band of catechists, who would not feel that propriety was outraged by the spectacle?

If the desire to condemn should be more apparent than the mere anxiety to investigate—if the tendency of the examination should seem designed rather to bear out preconceived opinions than to lead to a dispassionate judgment, deduced from the evidence—would not the innate love of justice, in the public mind, tend to a re-action? If, in short, the general tone assumed should be indicative of strong prepossession, would there not be danger lest the scrutiny of the legislator might, by some, be mistaken for the inquisition of the partisan?

Now these are dangers, to some of which every open Committee of the House of Commons is exposed, and we trust that our having hinted at the bare possibility of their occurrence may be of use, in preventing what we should certainly regard as a very serious evil, and as presenting the most formidable obstacle which can well be imagined to the labours of our legislators commanding general confidence, or leading to permanently beneficial results.

MEDICAL REFORM.

The Parliamentary Committee appointed to inquire into the state of the medical profession, continues its labours.

It is understood to have been proposed by Sir Robert Peel, that the sittings should take place only twice a week, with a view of affording some members an opportunity of attending, who are at present prevented from doing so by other engagements; but that the proposal was negatived. The gentlemen who have been examined, up to the present time, are, of the Fellows,

Dr. F. Hawkins, Sir Henry Halford, Dr. Macmichael, Dr. Seymour, Dr. Warren, Dr. J. A. Wilson, Dr. Billing, Dr. Elliotson, Dr. George Burrows, Dr. Waterfield; and of the Licentiates, Dr. Sims, Dr. Arnott, and Sir David Barry.

"A LATE OPERATION BY MR. CÆSAR HAWKINS."

Such are the terms of a notice on the wrapper of the Lancet last week, directing attention to the following statement which appears *as a leading article*:—

"An operation which has created an extraordinary sensation in the medical circles at the west end of the town, has lately been performed at St. George's Hospital. The operator was Mr. Cæsar Hawkins.

"Now is it too much to call on Mr. Hawkins, who holds a *public* situation in a *public* institution, to make known to the *public* the circumstances which led to the performance of this operation, with an explanation of the causes of the death of the patient? Assuredly not.

"We do, therefore, make the demand, on the behalf of the profession and the public, and thus we afford Mr. Hawkins an opportunity of publishing his own version of the catastrophe; and we trust that the appearance of his own report will render the publication of one by us altogether unnecessary."

Here is a regular tragedy, beginning with an "extraordinary sensation," and ending with a fatal "catastrophe." It has the merit, too, of resembling most dramatic compositions in certain other respects; for, like them, it is got up for effect, and like them, is a work of fiction. We scarcely know whether to laugh or be indignant at this specimen of Mr. Wakley's thunder. We are favoured with time, place, and circumstance, touching an event which never occurred; for the simple truth is, that no operation, to which the above display of praiseworthy zeal "on behalf of the profession and the public" can by possibility refer, has been performed either by Mr. Hawkins, or any other surgeon of St. George's Hospital. With respect to the gentleman mentioned by name as the performer, we may add that we find, on inquiry, that no patient has died subsequently to any operation performed by him during the last eight months—in short, that no "catastrophe" has occurred—that no one ever heard of the "extraordinary sensation" described by Mr. Wakley—and that no one has the slightest idea even of what he refers to.

Our impression is, that the Editor of the Lancet has been hoaxed; and if so, it is a very unjustifiable trick, because his indiscriminate and insatiable appetite for calumny rendered it a matter of certainty that the charges would be at once given to the world, and thus inflict on Mr. Hawkins whatever injury the libels of the Lancet are now capable of doing to any one. But the presumed circumstance of its being a hoax does not exculpate Mr. Wakley; for, though he has no access himself to the "medical circles at the west end of the town," or, we believe, at any other end of it, yet he might have ascertained of the servants at the hospital, had he taken the precaution to inquire, that no event such as he announces with so much virtuous indignation had occurred.

The medical officers of hospitals, and especially the surgeons, are placed in situations of great responsibility and great anxiety—their reputation, and with it their fortunes, being involved in the results of their public practice. Is it, then, too much to demand, that some little care should be taken to ascertain the truth or falsehood of charges involving their professional characters, before they be made public? Assuredly not. "We do, therefore (to give the Editor of the Lancet back his own words) make the demand on behalf of the profession and the public, and thus

afford Mr. Wakley an opportunity of publishing his own version of the catastrophe; and we trust that the appearance of his report will render the publication of any thing farther by us altogether unnecessary."

If a retractation as conspicuous and unequivocal as the original libel be not inserted in the Lancet, the editor shall hear farther from us on the subject.

CLINICAL LECTURE,

Delivered at the Middlesex Hospital,

By Sir Charles Bell.

HERNIA—*continued from* p. 927.

We were engaged in a very important matter—on the treatment in these cases of hernia. You ought to be obliged to those gentlemen who, by their publications, keep our interest alive to questions of practice. I ought to recollect that, although the rule is in my mind settled, you have your experience to gain, and must arrive at a perfect conviction of the propriety of certain measures, by attentive and repeated consideration of the subject.

On entering on this, and, indeed, on all important practical questions, we ought to lay the foundation of our reasoning on the facts ascertained by the examination of the dead body. Without fear of wearying you by repetition, I once more state to you what are the appearances in the abdomen, when a person dies of hernia—dies unrelieved by any operation. When you open the abdominal cavity, you find the intestines inordinately distended, inflamed, and discoloured. You find not only that the surface of the intestines is inflamed, but also the peritoneal lining of the abdomen; and you discover serum in the cavity of the abdomen, and flakes of coagulated lymph, if not pus. When you handle the intestines, and turn them aside, you perceive that it is the portions which are distended which are most inflamed, whilst others not distended are comparatively blanched. Investigating more particularly, and tracing the canal, beginning with the stomach, and so following it down along the duodenum and small intestine, you find that that part of the canal which extends from the stomach to the portion strangulated, is distended and inflamed, and that the portion reaching from the part strangulated to the rectum, is in an opposite, or, at least, in a contracted condition. The part above is of a dark lake or reddish brown; the part immediately below the stricture green and black; the lower part of the canal is little changed.

These appearances prove what is the cause of death. The intestine being obstructed, and the contents accumulating above, the canal is stimulated. The excitement increases the secretion, and the intestine, thus loaded, works until inflammation is the consequence. There is an additional cause of distress, and pain, and inflammation in the nip upon the gut, at the neck of the sack; and sometimes we can trace mischief to that cause. But in neglected cases, when the symptoms have been permitted to take their course, my first statement is most correct. I begin with this statement of the condition of the parts within the abdomen, because, happily for those patients whose cases are under consideration, they have survived the operation; and therefore we have not, in the present instances, the data on which we must reason. When the patient dies after the operation has been performed, you may find the bowels more empty, but inflamed, with a knot of agglutinated intestines near the groin, and the peritoneum lining the abdominal muscles exhibiting the signs of having partaken of the inflammation. And pray remember that this condition of inflamed bowels is the state most highly dangerous to the dissector who has a cut finger.

The next thing for your consideration is the cause of strangulation. At the last lecture, in considering the subject as stated by Mr. Guthrie, I suggested to you that the circumstance of muscularity in the stricture may answer the purposes of argument in inguinal hernia; but I stated, and I trust stated correctly, that the symptoms are the same in all herniæ; that the spasm, the intermission of pain, and the return of it after a cessation, were characteristic of all herniæ; and that therefore it did not serve as an explanation to represent the action of the transversalis muscle as accounting for the peculiarities of the symptoms. When the intestine is first pushed down, it is not strangulated, because the finger-like projection of the peritoneum, which is thrust through the opening in the walls, does not, as yet, permit distention of the intestine; and if the intestine be not distended, it is immediately withdrawn—there is nothing to prevent it. There is every reason to believe that a hernia forms gradually, by successive efforts pushing a portion of intestine or omentum into the finger-like process of the peritoneum, until both sac and intestine are thrust through the opening. When the intestine has escaped through the passage of the abdominal walls, then it is in dan-

ger of incarceration. I do not believe that any hernia forms at once, but that the bowels force against the peritoneum, and press this membrane into the passage; moulding it, and forming the finger-like process, which I have often found and preserved: at last a powerful and sudden effort pushes the gut quite through, and then strangulation may take place very quickly.

The tumor is the more dangerous, the smaller the portion of intestine. Mark, I beg you, the true difference between an old and large rupture, and a small and recent rupture. You will have a patient come to you with an imperfection in different parts of the abdominal walls; so that if you make him cough, there is a protrusion, perhaps, at the inguinal passage; another in some part of the belly; a third at the umbilicus. Such tumors gradually enlarge, and come down more and more; but the man is in no danger from strangulation. These ruptures are easily reduced, and often difficult to retain; whereas, if a horse soldier be mounting suddenly into the saddle, and in the moment of exertion feel a pain, and if he be obliged to leave the ranks, and the surgeon find a hard tumor in the groin thus suddenly formed, the man is in imminent danger, and a few hours will decide his fate. It is the same with a sailor in the excitement of an engagement, who, putting his foot on the stock of the cannon, pulls with all his strength at the rope, if in that moment of exertion, when the abdominal muscles are compressing the viscera, there slip down a portion of intestine, it is strangulated almost immediately, and his fate determined, although he may live for days after it.

Now there are sufficient reasons for this on mechanical principles: it is not a disease, and the terms acute and chronic are not applicable; for there is no analogy here with acute or chronic diseases. When the portion of intestine is by violence forced suddenly beyond the ring, or under the Poupart ligament, it has escaped from the abdomen. Now I entreat you to observe the importance of this word—*escaped*: by this you understand that there is a certain pressure on the parts within the abdominal walls; but that the fold of intestine has been forced out into the loose cellular texture, and escapes pressure, so that presently it undergoes distention! What with the suddenness of the distention, and the narrowness of the passage, the gut rapidly changes its condition; first to be incarcerated, where it cannot be reduced, and then to be strangulated, where the circulation is stopped. I will consider the case under three heads: 1, the distention of the gut; 2, the obstruction of the circulation in the gut; and, 3, the collection of serum between the gut and the sac.

Suppose a large portion of intestine has descended, the fæces gradually accumulate in it; by and by, the part of the intestine that is in the hernial sac is distended; of the fæces that are collected there, none can come out,—the turn is too acute; and the consequence of this is that no part of the contents of the intestinal canal can pass beyond the hernia. This is not the state of strangulation,—it is the state of incarceration, by the filling or distention of that part of the intestine that is within the sac.

Again, with regard to the mucus,—the secretion from the internal surface of the intestine itself: I have seen an operation in which the intestine has burst: I have seen another case, in which a small nucleus of intestine was wounded by the surgeon's knife; and what do you think came out?—only clear mucus. You can easily understand, that when a portion of intestine is down in the sac, the stricture may not be so tight as to produce strangulation, and yet be sufficient to impede the return of the blood by the veins of the intestine. There is then a gradual effusion; first, between the coats of the intestine; secondly, a secretion of mucus within the intestine; and, lastly, serum is exuded from its peritoneal surface. By this you perceive that over-distention of the intestine may take place by the dropping down of feculent matter from the canal, and by mucus secreted from its internal surface. Hence, you see that strangulation occurs, almost as a matter of necessity, in these circumstances; that the danger is increased even by the secretion of the intestine itself; and that, what with the infiltration into the coats of the intestine, and the secretion of mucus into its cavity, matters get worse and worse; and the intestine, as it is thus distended and thickened, is drawn tighter and tighter against the stricture.

The next head is *the serum*.—Now, I observed to you, at the last lecture, (and you saw the occurrence in the operation,) that the moment you open the proper sac, the serum spouts out; and you judge much of the condition of the parts, and of the likelihood of effecting a cure, by the state of this fluid. You are pleased to find that it is transparent; you are disappointed, if it be dark and bloody. What I was going more particularly to say, however, is, that this secretion of serum, whether it proceed from the inner surface of the proper sac, or from the surface of the intestine, is often the means of counteracting the distention of the gut, and retarding the

advance of alarming symptoms; for the secretion into the sac, and without the intestine, prevents the sudden distention of the intestine, and that, of course, prevents the strangulation. Further, on this head, I request you to observe, that there is another point of praetiee in which you must take the secreted serum into your consideration. You are sometimes deceived in the operation of the taxis, because, when you press for a length of time, you say, I am suceeeding, for the tumor is diminishing; but, alas! it is not a diminution of the distended intestine that you are produeing; you are merely reducing the amount of serous fluid external to the gut. It is highly important that you should notice this circumstanee, for it is very apt to make you believe that you leave the patient in safety, when the little knuekle of the intestine is just as it was before, or in rather a worse condition, being more subject to have its vessels gorged, and to run into the condition of strangulation.

The next eircumstance that we observe in the operation, is a leather-like thiekening of the intestine itself. There can be nothing more unlike than the portion of intestine which you see on dissecting a body, or in its natural condition, when alive, and that portion whieh you have presented to you in the operation for hernia. It is not only diseoloured by the pressure on the veins eausing a remora of the blood, but it beeomes leathery, by the seeretion within the coats. You know that the veins are compressed before the arteries, as they are more passive, and the arteries are active: just as the ribbon, in tying up the arm for bleeding, compresses the veins, and leaves the arteries pulsating, so does the strieture aet on the intestines.

This eonsideration will point out to you how the gut strangulates itself;—that, by the infiltration and distention of its coats, although the strieture be no narrower, the intestine beeomes more eompressed, and its circulation more and more impeded; so that it aequires a dark purple colour, in addition to the increased thickness of its coats.

I think I before mentioned, as an agreeable circumstance, that when you have undone the stricture, you find that almost immediately this dark colour changes to a brighter hue. This I would attribute to the freedom of the circulation being restored to the intestine, rather than to the influenee of the atmosphere on the blood in the vessels; because I mark this difference, that, in operating when too late, there is no such change produced in the colour; whereas, if you operate at a happier time, on removing the stricture by a little touch of the knife, and restoring the freedom of the circulation, you see a brighter colour in the gut.

So far I have endeavoured to plaee before you the appearanees on dissection within the abdomen, and the appearances which you witness during the operation; and I will now direct your attention to a case of *inguinal hernia.*

"Mary Toser, 29 years of age, a cook, unmarried, was admitted into Bird's Ward, on the 8th January, at two o'clock in the afternoon, with hernia on the right side. The tumor had been down thirty hours previous to her admission. She states, that about four months ago, on lifting a heavy pot, she found something give way, and, at the same time, felt a tumor, about the size of a nutmeg, in the groin; but she suffered no ineonvenienee till the 7th January: at eight o'clock on that day, whilst serubbing the floor, she over-reaehed herself, and immediately felt great pain in the part, with sickness: after this, she found the swelling much increased in size. It appears, also, that she had received the assistance of a surgeon, and the taxis had been employed previous to her admission. The bowels had not been opened since the morning before the aeeident.

This is the condition in whieh she is brought in: she vomits, and the matter brought up is quite clear; there is pain, and mueh distention of the abdomen; the tumor is full and hard; the pulse a little excited, but only 76. Attempts were again made, by the house surgeon, to reduee the hernia: she was put into the warm bath, bled to syncope, but without succeeding in the taxis. The surgeon of the week being sent for, and finding all attempts to reduce the hernia ineffeetual, determined to operate. The operation was performed at four o'clock. Nothing partieular was observed during it; the stricture was divided with great ease, and the intestine returned. After being in bed a short time, she had a dose of castor-oil with tincture of senna. At 8 o'clock in the evening, the bowels not being opened, an injection was administered. At ten o'cloek she deseribed herself as being quite easy: the pain was much less in the abdomen. There was a slight evaeuation after the injection. She beeame sick; the pulse 100, rather sharp; the skin soft; the tongue elean and moist; the pain in the abdomen chiefly confined to the lower part. Twenty leeches were applied to the abdomen, and the eastor-oil and tineture of senna were repeated. In the morning, the bowels had been four times copiously opened, and from that time every thing went on prosperously."

I do not know that I have any thing to

say about the operation, farther than, what you saw—that it went on according to rule. Yet I believe there was no person at the operation who was not exceedingly surprised to observe the extraordinary fineness of the sac. Though this occurs in the femoral hernia, I do not know that I ever saw so fine and transparent a layer of the peritoneum forming a sac as in this inguinal hernia. I offered you the practical inference on this subject in my last lecture.

I beg leave to direct your attention to the *taxis*. I need not repeat the common rule, as to placing the patient in a relaxed position, so that there shall be no resistance to your effort from the abdominal muscles—that the body should lie curved, the shoulders and hips supported, and the spine sinking so that the muscles may be relaxed. You attend also to the position of the thigh—that it is raised, and the toe turned in: in short, you are careful both to relax the walls of the abdomen and the connexion between the fascia of the thigh and the Poupart's ligament; (a remark, however, that especially regards the femoral hernia.) You then press upon the intestine, but do not at once attempt to push it up; for it is utterly impossible to do this. What is the object? It is to compress the intestine gently; for you remember that it has escaped—that is to say, that there is more pressure on the parts within than on the small portion without; you equalize, therefore, the pressure; but you do more—you empty the included gut of its contents; and, in order to accomplish this, besides squeezing, you stroke the tumor downwards, in order to stretch the neck of the sac. If you push the whole tumor up, you twist the intestine at the neck of the sac, and make it utterly impossible to empty the gut, or to reduce it. The object is to compress the tumor gently and equally, in order to get the contents of the intestine which is in the sac out of that portion, and into the part which is within the abdomen. Accordingly, as soon as you hear a little gurgling, as if the intestine were emptying itself, you know that you are about to succeed, because you have subdued the angle of inflection which the intestine makes around the stricture. You have now to make the intestine itself empty, and then, by a little more urgency of the finger, it is excited to draw itself into the abdomen.

Bleeding is very proper. Not having succeeded in the taxis at first, the patient should be bled. I would say bleed, because the principal danger is from inflammation. But they say, "bleed *ad deliquium*:" and this is recommended on the idea of there being spasm in the neck of the sac. I do not, however, object to bleeding even to this extent; seeing it is right to take away blood, whatever the theory may be. As to the application of a cold lotion, or ice, I say it is wasting time. The warm-bath is another useful means for relieving pain and spasm in the bowels; and I have explained to you how spasm, by drawing the gut and producing tormina, does harm: but do not employ it without bleeding, because then there is too much excitement. After bleeding, the warm-bath is favourable to reduction; and if you must wait, it certainly tends to keep off inflammation. A tobacco clyster has been recommended, but I never think of using it, for it is dangerous—it weakens too much; and the alleged object of employing it still is to take off spasm from the ring. I know not what can be the advantage of tobacco, unless it be to reduce the patient to that condition that he himself supposes it is all over with him; and so he lets you do what you think good. If it reduce him at once to that state of sickness—to that apparent approach of death that the friends permit you to operate—there is advantage; but recollect this may be carried too far, and a patient has actually died under the influence of the poison. The main objection to all these successive means is, that precious time is lost.

In the next place, as to clysters, you would not give purgatives with the idea of withdrawing the intestine from the sac, because it cannot be withdrawn when in a state of distention: you must remember that drawing the intestine in that way is pulling it where it is tender, and lying against the sharp edge of the stricture. What is worse than all, by purgative medicines we excite the upper portion of the intestine, and accumulate the secretions in it; thence causing more twisting of the bowels, contraction, pain, and inflammation. But there is not the same objection to large clysters, because they only excite in a certain degree; and when the excitement comes on, the intestine is immediately relieved of its contents, and there is a period of rest to the upper part, and a relief of the pain which proceeds from the twisting and working of the bowels. So far clysters are harmless; but we cannot say that any thing is harmless which leads to delay, and I would advise you to trust neither to position, nor to bleeding, nor to bathing, nor to clysters, nor to tobacco, nor to any thing but your own hand. All these modes of reducing a hernia are nothing compared with the well-directed and careful efforts of the surgeon's hand; and when that fails, urge the operation imme-

diately. Do not wait for the effect of these remedies; they are nothing. The moment that you find the tumor is hard, incompressible, not yielding in the slightest degree; that there is no gurgling, no diminution of the convexity and hardness, not the slightest appearance of getting the contents of the intestine out, urge with all your eloquence the propriety of the operation; for there is little danger if the operation be performed at the proper time—the greatest possible danger if it be delayed after a certain time.

But to shew you that I am not carried away by any thing like theory, I shall tell you what occurred to me. A gentleman of large fortune, and of consequence from his position in society, felt a tumor in the groin. He lived 30 miles out of town, and he conceived that this tumor was a bubo: what reason he had for this notion is not our concern. He threw himself into the mail-coach that was passing his gate, and came up to town. When I saw him, and felt the tumor, I said that it was a hernia, but I could not convince him of it. He was drinking his cup of tea; but I saw him occasionally, from time to time, go into a back parlour, and I heard him discharging the contents of his stomach into a basin, and then he came back again. Friends came in, and he was complimented on his looks; he was excited. I explained to him his danger; I begged that he might have farther assistance, for I saw that I was not making the impression on him that was necessary; he had no conception of an operation being required. The celebrated Mr. Cline, who was then in the zenith of his great practice, was called in. Here was a man who was allowed by all to be at the head of his profession; he saw the patient, and he said, "I am not sure that there is a hernia here at all." Of course, I lost confidence in myself; for Mr. Cline I considered, and justly considered, the highest authority. I was quite thrown out. He appointed a meeting for the next day; and on the next day he said, "I believe you are right, there is a hernia; but the symptoms do not press." I had reconsidered the whole case, and had prepared for the operation. You will say it was weakness in me to yield to this opinion; no, it was right. We appointed to meet the following day, and on that next day the patient was dead. On dissection of the tumor, there was first found an inguinal hernia, and under that a crural hernia, containing a small portion of intestine, not larger than my knuckle, like a ripe cherry, but darker, and in a state of complete strangulation.

Now this happens from time to time. The portion of intestine is nipped and strangulated, and that without any very urgent symptoms. What is the meaning of this? You see a patient with all the characters of a strangulated gut; and you expect that he will die, perhaps under your own hand. This was the expectation in the very first case of hernia that I ever operated upon. All my colleagues said, "It is right that the operation should be performed, but it is hard for a young man to operate where there is no hope of success." The woman was sick, faint, and frantic; she was laid on the operating table by force—force, not against her reason, but against her delirious efforts; yet the operation was successful; whereas, in many cases that I could mention, there was no such prolonged suffering, no violence of symptoms, but still there was mortification of the gut. I say, then, it is most important for you to distinguish what is really meant by the symptoms of strangulation. I maintain, that there are no symptoms of strangulation; and I say that the symptoms of hernia are the symptoms of distended and obstructed bowels, and that they are precisely the same that we have from stricture of the bowel. I can give you an instance of it.

I attended an old gentleman, a physician, who had a cancer in the rectum; and when I saw him his abdomen was greatly distended. He had had no evacuation; his pulse was quick, but weak; he was vomiting continually; he had hiccup; he had the *facies hippocratica*; he had all the symptoms of strangulated hernia. I passed an ivory tube through the ulcerated rectum, and threw up an injection, which injection brought away a quantity of yellow liquid matter, which filled a large hand-basin. The next morning he was well; not one of the symptoms remained; his countenance was better; the hiccup was gone; the distention of the abdomen was removed; he could pass urine without the catheter; the pulse recovered, and he lived two months after. He died of his cancer; but he was saved from immediate death as a consequence of over-excitement of the intestinal canal. Now I say it is owing to distention of the canal, in that portion of it between the stricture and the stomach, that you have what you term the violent and decided symptoms of strangulation; and if a man vomit easily, discharge the contents of his stomach from time to time, and the upper portion of the intestine be thus relieved by an anti-peristaltic motion, he may perhaps survive a long time, and may recover, if the intestine has been engaged and distended, but not strangulated. But if, instead of the gut being incarcerated, it be strangulated, that is, deprived of circulation through it, how long will he

live? The symptoms which you find enumerated in your books are not arising directly from the mortification, or from the inflammation, or from the hurt inflicted on the portion of gut. Here is the source of discrepancy, then; here is the cause of the apparent contradiction in the history of cases;—that in some you have violent symptoms, and yet the patient does well, while in others you operate where there are no violent symptoms, and the patient dies.

Now let us come to the question, how long you are to wait. Why, not a moment. Our very first authority was Mr. Cline; and the surgeon I would most trust to, after Mr. Cline, is Mr. Cline's colleague; and what has he told us? That if the person be not relieved in four or six hours —I forget which—he would have the operation performed. Why wait four hours? What is going on during the four hours, if there be strangulation? What is strangulation? Strangulation, as distinguished from incarceration, is that condition where the intestine is so tightly embraced that there is no circulation in it. If that be strangulation, how long will the intestine live after it has commenced? Will it live half an hour? I do not know how long it may live; I should not think more than half an hour. Here is the point to which I have always wished my pupils to address themselves: first, to get a right notion of the symptoms; then they will be competent to ascertain what is really meant by strangulation; and if it be meant by that term that the circulation is cut off, it has to be determined how long should we wait before we operate? You see, then, that in this uncertainty you have to trust to the hand, to the feeling of the part, in judging of the possibility or probability of the reduction of the hernia; and if you cannot reduce it, do not wait for symptoms; for symptoms are most deceptive here. Urge an immediate operation.

Having arrived at this part of the session, I think I have completed more than I promised. It is now the time at which, in justice to you, to my colleagues, and myself, I think that some other ought to occupy this place; and I therefore hope that one of my colleagues will meet you this day week.

ROYAL INSTITUTION.

Friday, March 7, 1834.

New Theory of Electro-chemical Decomposition.

Dr. Faraday having recently communicated a paper to the Royal Society, on the subject of the influence of electricity in decomposing bodies, was induced to anticipate its publication, by explaining to his friends this evening some of his new views. He began by stating the peculiarities that belong to chemical decomposition, where changes are effected in the constituents of bodies, and new compounds are formed, by the influence of mutual affinities merely. In these changes the decompositions and new combinations are invariably produced by the constituent particles being brought into almost immediate contact. But the case is very different where electricity is employed. Here the constituents are disengaged, being acted upon by forces operating often at a considerable distance, and through media which remain unaffected; and no new combinations are formed—the elements being extricated in a free state. These are facts which place electro-chemical decomposition on a footing perfectly distinct from that which is merely chemical; and it was by the contemplation of their possible causes that Dr. F. had been enabled to construct a new theory on the subject. All his predecessors, including among them Sir H. Davy, had each professed to give different and original explanations of the phenomena; but the opinions of all were really identical. They assumed that an attractive influence was exerted on the particles, by the poles of the battery; but Dr. Faraday's view of the matter is, that the current of electricity communicates rather a repulsive property to the constituent particles, which thus become disengaged. In support of his theory the lecturer performed several beautiful experiments, which were executed with that quickness and delicacy for which he is so justly celebrated. We cannot pretend, in a short notice like this, to enter into details; nor should we be over-anxious to do so, as Dr. Faraday's paper, with full particulars, may be expected so soon to be laid before the public.

Friday, March 14.

Mr. Richard Phillips ably followed up the subject of electro-chemical decomposition, by a series of experiments, chiefly intended to illustrate the *chemical* phenomena.

We never saw the Institution so fully attended as it has been this season; it tells strongly in favour of the efficiency of the officers; and we cannot help congratulating the managers on the prospects of the establishment. Mr. Fuller's munificent endowment of a professorship of physiology (in addition to the chemical one instituted by him last year), and his contribution of funds—altogether amounting to

about 10,000*l.* sterling—entitle that gentleman to be styled a public benefactor; for we know of no institution the proceedings of which are so closely identified with the interests of the public.

ANNIVERSARY OF THE LONDON MEDICAL SOCIETY.

The anniversary meeting of this society, which was reeently held at the London Coffee House, was attended by a large concourse of its members. The chief business of the day was to distribute the medals to the successful candidates, who had written Essays upon subjects proposed by the society. The Fothergillian gold medal, which is open for competition to all the members of the profession, was awarded to Mr. William James Clement, of Shrewsbury, for an Essay upon the Nature and Treatment of the Diseases of the Urethra. This is the same gentleman whose work, entitled "Observations on Surgery and Pathology," we recently reviewed in our pages; and it afforded us great pleasure to find that the strong terms of praise which we gladly bestowed upon his book, met with so solid a confirmation from a part of the profession so unbiassed and so well able to judge of his merits. Two silver medals were afterwards presented to members of the society—one to Mr. Cole, for an Essay, and the other to Dr. Negri, for his valuable Observations on the Secale Cornutum, which may be found in our present volume.

After the distribution of the medals, the Oration was delivered by Dr. Shearman. He took the occasion to give an interesting history of the Medical Society, tracing it from its foundation, and dwelling upon the eventful changes it had witnessed during the long period of its existence, in the relative positions of the different ranks of practitioners, and in the education and literature of the profession. He did not omit to point out how considerably the weekly medical journals, by supplying many of the purposes for which such societies were originally instituted, as the early diffusion of important medical intelligence, have interfered with the full attendance of the members; but, at the same time, he shewed very distinctly the peculiar advantages to be derived from the oral discussions, and the emulation that it produced by awarding the medals which the society has in its gift. Appealing, then, to the names of the distinguished men who formerly belonged to this body, he earnestly solicited the members to continue their exertions in maintaining its prosperity.

A GENERAL BILL OF THE BURIALS, WITHIN THE CITY OF LONDON, AND BILLS OF MORTALITY,

From Dec. 11, 1832, *to Dec.* 10, 1833.

DISEASES AND CASUALTIES OF THE YEAR.

Diseases.	
Abscess	131
Age and Debility	2952
Apoplexy	442
Asthma	1265
Cancer	105
Childbirth	275
Cholera	1150
Consumption	4355
Constipation of the Bowels	26
Convulsions	2140
Croup	151
Dentition or Teething	473
Diabetes	6
Diarrhœa	19
Dropsy	860
on the Brain	860
on the Chest	100
Dysentery	5
Epilepsy	8
Erysipelas	82
Fever	530
(Intermittent or Ague)	13
(Scarlet)	481
(Typhus)	100
Fistula	3
Gout	53
Hæmorrhage	42
Heart, diseased	145
Hernia	29
Hooping-cough	1040
Hydrophobia	4
Indigestion	9
Inflammation	2607
Bowels&Stomach	499
Brain	236
Lungs and Pleura	548
Influenza	135
Insanity	142
Jaundice	55
Jaw, locked	6
Liver, diseased	302
Measles	524
Miscarriage	20
Mortification	241
Paralysis	212
Rheumatism	37
Scrofula	19
Small-pox	574
Sore Throat and Quinsey	57
Spasm	79
Stone and Gravel	19
Stricture	16
Thrush	109
Tumor	43
Venereal	6
Worms	2
Unknown Causes	887
Stillborn	934

Casualties.	
Drowned	108
Died by Visitation of God	39
Excessive Drinking	5
Found Dead	8
Killed by various Accidents	169
Murdered	4
Poisoned	6
Suicides	55

Buried { Males ..... 13,319 / Females .... 13,258 } Total 26,577

Of the number buried were,

Stillborn	934	60 and under 70	2551
Under 2 years of age	6261	70 and under 80	2043
2 and under 5 years	2805	80 and under 90	802
5 and under 10	1145	90 and under 100	107
10 and under 20	970	100	3
20 and under 30	1700	101	1
30 and under 40	2225	102	1
40 and under 50	2615	103	1
50 and under 60	2412	104	1

Decrease in the burials reported this year, 2029

Executed this year within the Bills of Mortality 4, none of which have been reported to have been buried as such.

[The Bills of St. Luke's, Chelsea, have reached us in a separate form: they appear to be drawn up with care; and we shall probably notice them on an early occasion.—Ed. Gaz.]

ANNUAL METEOROLOGICAL REPORT FOR THE YEAR 1833,

Kept at EDMONTON *and* CHELTENHAM.

EDMONTON.

Month.	THERMOMETER.				BAROMETER.				RAIN.	WINDS.							
	Highest	*Lowest.*	*Mean.*	*Range.*	*Highest*	*Lowest.*	*Mean.*	*Range.*	*Inches.*	*N.*	*S.*	*E.*	*W.*	*N.E.*	*S.E.*	*N.W.*	*S.W*
January...	45	19	34·36	26	30·55	29·34	30·1055	1·25	·4	3	..	2½	..	12	6	2	5½
February .	53	27	42·23	26	29.94	28·85	29·5086	1·09	4·275	..	2	..	1	4	½	5	15½
March	53	18	37·65	35	30·20	29 04	29·8446	1·16	·775	1½	1½	..	..	13½	3	6	5½
April	62	26	46·56	36	30·13	29 06	29 7142	1·07	1·85	1½	1	1½	4½	2	..	2½	17
May	81	37	60·30	44	30·46	29·58	30·0525	·88	·85	2½	3½	1	1	5½	6	6	5½
June	78	36	59·16	42	30·24	29·47	29·5960	·77	1·625	..	3½	..	4½	1	3	1	17
July.....	82	39	62·40	43	30·33	29·66	29·9688	·67	1·4	4½	..	..	2½	1	1½	12	9½
August....	73	35	56·14	38	30·29	28·91	29·9453	1·38	·9	3½	..	..	6½	2	..	10	9
September.	67	34	55·09	33	30·26	29 31	29·8187	·95	2·975	2½	4	..	4	..	3	7	9½
October...	62	27	49·97	35	30·16	29·04	29·7520	1·12	2·125	6½	2½	..	2	6½	2	2	9½
November.	61	23	43·42	38	30·21	28·94	29·8398	1·27	2·575	..	2½	1½	1	2½	1	2½	19
December.	57	31	45·58	26	30·06	29·23	29·6051	·83	3·87	..	½	..	2	..	..	3½	25
Year	82	18	49·40	64	30·55	28·85	29·8458	1·70	23.625	25½	21	6½	29	50	26	59½	147½

CHELTENHAM.—KEPT BY MR. SAMUEL MOSS.

January ...	48·5	27 0	36·65	21·5	30·38	29·22	29·953	1·16	·58	3½	½	8	..	3	12½	1	2½
February ..	54·5	30·0	43·69	24·5	29·81	28·72	29·32	1·09	5·66	1	3	2	4½	½	5½	3½	8
March	54·5	29·0	39.88	25·5	30·05	28·80	29·63	1·25	2·015	5	1½	6	2½	10½	3½	..	2
April.....	64·0	35·0	48·37	29·0	29·98	28·82	29·56	1·16	3·115	6	3	1	3½	½	1½	3	11½
May	79·0	41·0	59·258	38·0	30·12	29·18	29·82	·94	·72	2	9½	3	2½	2	6	1	5
June	76·0	46·0	58·075	30·0	29·96	29·20	29·561	·76	3·885	..	7	..	6	1	6	½	9½
July	74·0	46 0	60·07	28·0	30·13	29·40	29·748	·73	3·175	4	2	1½	8	3	3	1½	8
August	69·5	45·5	57·637	24·0	30·06	28·85	29·707	1·21	1·565	2½	1	..	14½	4	½	5½	3
September.	63.0	40·5	54·291	22·5	30·06	29·15	29·663	·81	3·77	6	5½	½	2½	2	6½	3	4
October....	62·5	39·5	51·5	23.0	29·98	28·90	29·564	1·08	2·94	2½	1½	5½	4	2	8½	1	6
November..	60·5	33·5	47·208	27·0	29·99	28·60	29·659	1·39	2·255	½	5½	1	3	..	4	5	11
December..	57·5	33·0	46 94	24·5	29·89	29·11	29·487	·78	3·775	..	3½	..	10½	..	½	3½	13
Year.....	79·0	27·0	50·297	52·0	30·38	28·60	29.639	1·78	33·445	33	43½	28½	61½	28½	58	28½	83½

GENERAL OBSERVATIONS.

THE mode of keeping these registers is as follows:—

At *Edmonton*, the warmth of the day is observed by means of a thermometer exposed to the north in the shade, standing about four feet above the surface of the ground; the extreme cold of the night is ascertained by a horizontal self-registering thermometer, in a similar situation. The daily range of the barometer is known from observations made at intervals of four hours each, from eight in the morning till the same time in the evening. The weather and direction of the wind are the result of the most frequent observations. The rain is measured every morning at eight o'clock.

At *Cheltenham*, the temperature is ascertained by a horizontal self-registering thermometer, suspended about five feet from the ground, in a north-east aspect. The temperature and quantity of rain fallen are registered at eight o'clock A.M. The barometer, winds, and weather, at eight o'clock A.M., and eight o'clock P.M.

CHARLES HENRY ADAMS.

DISTINCTIVE CHARACTER OF HUMAN BLOOD.

M. Barruel, some time ago, attempted to point out the means of distinguishing human blood from the blood of animals. The former, he said, emitted a peculiar and specific odour, when acted upon by sulphuric acid. Von Wedekind, of Darmstadt, has recently examined the proofs of this fact, and informs us, that if the acid be properly employed, an odour *sui generis* will certainly be exhaled: but he adds, that such evidence of the presence of human blood can scarcely be rendered available in medico-legal inquiries; for whenever he requested the opinions of different persons regarding the smell in question, they always disagreed. It would seem *de odoribus, sicut de gustibus—non disputandum.*

CONCOURS AT MONTPELIER.

The chair left vacant by the death of Delpech has been only very recently filled. M. Serre is the new professor, having obtained the appointment by a stormy *Concours.*

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The Anatomy of the Human Eye; being an Account of the History, Progress, and Present State of Knowledge, of the Organ of Vision in Man. By John Dalrymple, Assistant-Surgeon to the Ophthalmic Infirmary. 8vo. illustrated with plates.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *March* 25, 1834.

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Age and Debility	45	Hooping-Cough	7
Apoplexy	6	Inflammation	25
Asthma	24	Bowels & Stomach	6
Cancer	2	Brain	5
Childbirth	3	Lungs and Pleura	7
Consumption	67	Insanity	1
Constipation of the Bowels	2	Jaundice	1
Convulsions	31	Liver, diseased	6
Croup	5	Measles	9
Dropsy	18	Mortification	1
Dropsy on the Brain	9	Paralysis	3
Dropsy on the Chest	3	Rheumatism	2
Erysipelas	1	Small-Pox	2
Fever	9	Sore Throat and Quinsey	2
Fever, Intermittent, or Ague	1	Spasms	2
Fever, Scarlet	10	Thrush	2
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WORKS OF JOHN HUNTER.

We are requested to add to our previous announcement of the forthcoming edition of Hunter's Works, that the editor (Mr. Palmer) has in preparation a new memoir of the illustrious author, and is desirous that all who have correspondence or information to afford respecting the subject of his memoir will favour him by communicating it. Mr. Palmer's address is 38, Golden-Square.

NOTICES.

Mr. O'Reilly's letter has been forwarded to Mr. Warburton.

We shall be glad to see the paper to which our correspondent in Clifford's Inn alludes.

The papers of Dr. Stevens, Dr. W. Philip, and Mr. Chevalier, have reached us.

Dr. Rigby's paper has been received, and the opportunity he desires shall be afforded him.

W. Wilson, Printer, 57, Skinner-Street, London.

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W. WILSON, PRINTER, 57, SKINNER-STREET, LONDON.